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SIZING DETERMINATION FINAL REPORT

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18. ABSTRACT (continued)

This study proved that mask sizing from an analysis of facial measurements is not likely to provide a better fitting methodology than the presently used TM method. It was also found that the level of protection is generally unaffected by size. Operational capability is best determined subjectively utilizing the actual mask to be worn. It is therefore recommended that the worn mask in conjunction with a quick leak check be utilized as the optimum method of sizing determination.

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PREFACE

The work described in this report was authorized under Contract No. DAA629-81-D-0010. This work was started in April 1983 and completed in June 1984.

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SUMMARY

The objective of this effort was to conduct a sizing study which would result in the development of nonsubjective sizing devices for the M17 and the XM40 masks. Sizing paramenters were established and measuring devices were fabricated to improve the precision and accuracy of measuring facial characteristics, ILC Dover conducted an in-house test to comparatively examine the methods of sizing determination, and CRDEC conducted a combined anthropometric / protection factor study. Analysis of both sets of data for the aforementioned tests by Battelle, CRDEC, and ILC indicates that the use of facial measurements does not accurately determine the optimum mask size which provides the best mask fit. This study proved that mask sizing from an analysis of facial measurements is not likely to provide a better fitting methodology than the presently used TM method. It was also found that the level of protection is generally unaffected by size. Operational capability is best determined subjectively utilizing the actual mask to be worn. It is therefore recommended that the worn mask in conjunction with a quick leak check be utilized as the optimum method of sizing determination.

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SIZING DETERMINATION FINAL REPORT

1. INTRODUCTION

During 1983, the U.S. Army Chemical Research, Development, and Engineering Center was tasked under the Commander AMC Initatives to investigate areas in which the XM40 masks could be improved. A program to develop a methodology to objectively size a soldier in the correct mask size was initiated. The program incorporated the services of individuals from three orçanizations; Mr. George C. Derringer, Battelle Columbus Laboratory; Dr. A. Theodore Steegmann, SUNY at Buffalo, and Hr. Robert C. Wise, ILC Dover. This effort was completed in June 1985 and is detailed in a Chemical Research, Development and En-Center (CRDEC) Technical gineering Report entitled "Evaluation of Sizing Techniques for the XM46 Protective Mask" by Smith. Linda L. Crawford-Hoss, and A. Theodore Donna M. Steegmann, Jr. Ph.D. The findings of this initial work resulted in the development of an objective method of sizing. However, the method was extremely complicated and not suited for field use.

A second phase was initiated in an effort to determine if a simpler non-subjective method could be developed. The second phase which is covered in this report included a review of the existing data base, a literature review to see if any previous work had been done in this area, and additional test program to increase the data base from phase one.

The principle reports examined during the literature review concentrated on the Rock Ready Anthropometric Data base and the *Evaluation of Sizing Techniques for the XX-10 Protective Nask (CRDEC-TR-87045), the report generated as a result of phase one of this effort.

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Critical sizing parameters were identified and a survey of existing sizing determination tools was conducted. Modification of the existing M17 bool and development and fabrication of landwark finders and tape holders followed.

These tools were then evaluated in a three-phase invastigation performed by ILC to determine the ability of technicians to take necessary anthropometric measurements and a protection factor sizing study performed at CRDEC. Data from these studies were analyzed and results were presented in the form of "Box and Whisker" diagrams by Battelle and "Size line" diagrams by CRDEC. These results were reviewed and it was concluded that the optimum method of sizing determination is that described in the current technical manual (TM3-4240-300, Ref. 1).

2. LITERATURE REVIEW

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2.1 REVIEW OF CRDEC-TR-87045 REPORT

In this study the innovative idea to use multiple discriminant analysis to determine which linear combinations of facial measurements were the best predictors of mask size was evaluated. The study was conducted using two mask types, Scott and ILC masks. For evaluation of each, 40 subjects were evaluated in small, medium and large mask sizes. Since some subjects were

com to evaluation for both mask types, the total number of subjects was fewer than 80. As a check or be sure this sample population was not typical, measurements were statistically compared to historical data. Although the ranges for the samples were in smaller Bost cases, t!:e samples were considered to be acceptable. The smaller ranges can be attributed to a high er percentage of females in the snaple populations and the proand the predictable consequence of smaller size. For example, in sampling from most distributions, the sample range increases with sample size.

The criterion used to determine whether an acceptable fit had been obtained was the "Best Fit" criterion. This criterion medified the TM fit in the event that the TM fit resulted in unacceptable protection factors.

The results of this work were success rates (i.e., success being assignment of correct size) for the ILC and Scott masks of 84 and 77 percent respectively.

2.1.1 Analysis of CRDEC-TR-87045 Data

As part of the overall program Battelle was tasked to critique the above report and if deemed useful, subject the data to further data analysis. Battelle also subjected the data to discriminant analysis using the same facial measurements. In addition, however, two additional measurements were included, weight to height ratio and facial perimeter (See pages 14-15 for the

location of these points). For the latter, the sum of bitragion crinion and bitragion menton arc was used. This was the better of two alternative face perimeter measurements.

2.1.2 Results of Battelle Discriminant Analyses of CRDEC-TR-87045 Data

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The variables used by Battelle in their stepwise discriminant analysis are shown in Table 1. These are the same as used in the above referenced report with the addition of X17, X18, and X19. X18 and X19 are the two alternative facial perimeter measurements Tables 2 and 3 present the results of the discriminant analyses for Best Fit and TM fit cases respectively. In each table for each mask the variables are listed in their order of importance. For example, for Best Fit (Table 2) of the ILC mask the most important variable (from the standpoint of usefulness as a predictor of mask size) was weight/height ratio. This single variable resulted in a 61.5 percent correct classifi-Addition of mention masion measurement increased this number to 69.2 percent, whereas the third most important nasion-end-of-bone, reduced percent of classification to 66.7 percent. Such reductions, which do not seem to make sense, are usually the result of intercorrelations among the predictor variables. The other results in both tables are interpretted similarly.

One of the more interesting results of the discriminant analysis for the best fit case was that a discriminant function containing

only two variables, weight/height ratio and menton nasion distance resulted in the correct classification for the ILC mask of greater than 69 percent. Weight/height ratio was also an important variable for the Scott mask, but in this case, was the second most important variable.

TABLE 1. DESCRIPTION OF VARIABLES (CRDEC-TR-87045, DISCRIMINANT ANALYSIS STUDY)

Xl Maximum Frontal Diameter X2 Bitemporal Fossa Diameter X3 Bizgyomatic Diameter X4 Bigonial Diameter X5 Interpupillary Distance X6 Nasal Root Breadth X7 Nasal Breadth X8 Nasion Crinon X9 Nasion-End-of-Bone X10 Menton Nasion Xll Bitragion-Crinon X12 Bitragion-Minimum-Frontal Arc X13 Bitragion-Menton Arc X14 Bitragion-Submandibular Arc X15 Bigonial-Menton Arc X16 Head Circumference X17 Wt/Ht $X18\sqrt{(X8+X10)^2+X3^2}$ X19 X11 + X13

TABLE 2. SUMMARY RESULTS FOR STEPWISE DISCRIMINANT ANALYSIS (F - ENTER = 2.0) - BEST FIT CASE

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Step		Variable	Percent Correct Classification
		A. ILC Mask	
1	X17	Weight/Height	61.5
2	XlO	Menton-Nasion	69.2
3	Х9	Nasion-End-of-Bone	66.7
		B. Scott Mask	
1	X 1	Max Frontal Diameter	48.7
2	X17	Weight/Height	59.0

Discriminant analyses were also run for the "TM" fit case. The variables which entered the discriminant function in this case are shown in Table 3. It is interesting that weight/height ratio was again important for the Scott mask. In addition, the facial perimeter as measured by XII + X13 was also important. However, neither of these factors were significant in the ILC mask analysis.

The significance of the weight/height ratio is interpreted as be ing correlated to the amount of fatty tissue on the face which would be expected to impact ease of fitting. Other explanations for the importance of this variable could also be proposed. The ease of collecting weight and height data make this ratio particularly useful for field fitting.

2.1.3 Conclusions of Battelle Discriminant Analysis

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Even with the expanded list of variables Battelle was not able to improve upon the discriminant function for "Best Fit" which was developed in CRDEC-TR-87045. The highest numbers for percent correct classification were 66.7 and 59.0 for ILC and Scott masks respectively. The results for "TM" fit were considerably better at 89.7 and 71.7 percent respectively. CRDEC did not run discriminant analyses for TM fit and so comparisons could not be made.

The discriminant analysis results obtained from both assessments suggest that this statistical tool will not improve the accuracy with which mask sizes are assigned. On a more fundamental basis, Battelle's assessment is that discriminant analysis has dubious

merit as a methodological basis for mask sizing. One major problem with it is the primary requirement of discriminant analysis that each subject fall into one and only one category. Although each subject of this study was assigned to only one category, in several cases the assignment was rather arbitrary. For, example, for the subjects tested in Scott masks, 14 out of 40 (35 percent) were cases where any of the three sizes provided protection factors near 20,000 for all three protection factor T tests. For ILC Dover subjects, 12.5 percent were found to have sizes. Therefore acceptable protection in all three underestimate the discriminant analysis may correct This argument, of course, classification percentage. take into account the use of the TM fit and comfort factors considered therein as a tie-breaker. Even considering these factors however; it is well known that more than one mask can be acceptable from both protection factor and comfort standpoints. Another objection to discriminant analysis is that linear combinations of facial dimensions are blindly evaluated. It might be the case that ratios, not sums are more appropriate. It is clear that if discriminant analysis is employed it be quided by the expert judgements of an expert in anthropometry.

TABLE 3. SUMMARY RESULTS FOR STEPWISE DISCRIMINANT ANALYSIS - TM FIT CASE

	Percent Correct
Variables in Discriminant Function	Classification
A. ILC Mask	
хіз	51.3
X13, X10	53.8
X13, X10, X15	56.4
X13, X10, X15, X6	76.9
X2, X6, X10, X13, X15	76.9
X2, X6, X10, X14	74.4
X2, X6, X7, X10, X14	89.7
B. Scott Hask	
X19	56.4
X19, X17	56.7
X19, X17, X3	71.8

2.2 CONCLUSIONS: LITERATURE REVIEW

These reports evidence the necessity to eliminate variance among the collection of anthropometric data, and to provide a representative subject population. Recognizing the primary faults with the CRDC-TR-85 survey and other anthropometric studies, modified sizing devices were developed to improve consistency of measurement and test protocol with proper training was established.

3. SIZING DETERMINATION DEVICES

3.1 CLEAR MASK/CLEAR TEMPLATE

The clear mask (a clear silicone skeleton of the actual mask body) and the clear template were still under consideration as sizing determination devices at the outset of this program. These devices were developed to allow the fitter to visually examine where the mask periphery is in relation to the ectocanthus (outer corner of the eye), tragion (top of ear canal), and the hairline.

Both the clear fitting mask and clear templates were evaluated for ease of use at CRDEC. The following observations were noted regarding the clear mask and the clear template:

Clear Mask:

- i) A little hard to center.
- ii) Mouth/chin area was hard to see through mask.
- iii) Size was not self-evident, and use of clear templates to assign proper sizes was required.
- iv) Closely simulates actual mask.
- v) Red demarcator lines were easy to see at eye and forehead, not at chin.
- vi) Easy to see nose-cup fit, but not periphery/skin contact

(as had been hoped).

vii) Subject could tell by "feel" which one fits best.

Clear Template:

- i) Fits periphery less well than clear fitting mask
- ii) Should be down-sized 1/2 size (i.e. S/M should be marked H).
- iii) Speed and ease of use is superior.
- iv) Good visibility in most critical areas.
- v) Need for small subjects in final testing is stressed.

The clear mask and clear template were no longer pursued since the sizes of the clear masks and templates were slightly off due to the dissimilar shrinkage factor of the clear material. In addition, the same type of information which could be obtained from a clear mask could be obtained from a regular mask.

3:2 M17 SIZING CALIPER

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The M17 sizing caliper was also evaluated during the course of this program by Dr. A. T. Steegmann for its utility in obtaining facial measurements. This caliper was originally used to guage pipes and other pieces of inanimate shop work, and does not adapt gracefully to facial measurements.

The caliper lacks its own scale and consequently, once a measurement is taken, a second step (placing it on a scale) is necessary to get a metric reading.

The arms of the caliper run along the axis being measured when used for face height. For this measurement, it is essential that the arms cross that axis at right angles. Consequently, these calipers are suited to diameters (face width) but not lengths

(face height).

The calipers open and close by means of fine-threaded bolt, (which works very slowly, and is hard to adjust while in place). Regular anthropometric calipers operate by friction, using a set screw if a fixed dimension is desired.

The caliper arms have pointed ends and are very dangerous to use on the human face. This tool was modified by ILC Dover to eliminate the pointed ends (see Appendix A) and was used as an anthropometric tool in the evaluations conducted both at ILC and CRDEC.

In sum, however; these calipers are slow, awkward to handle; dangerous and less accurate than calipers designed for use with human subjects and are not recommended for use in mask sizing determination.

3.3 ANTHROPOMETRIC LANDMARK FINDING INSTRUMENTS AND TAPE HOLDERS
A series of anthropometric landmark finder instruments was
developed with two purposes in mind. First, it was hoped that
they would reduce between-technician error during the verification experiments. Second, were anthropometric traits to finally
be chosen for field application, these simple, fool proof instruments would greatly standardize assignment of masks.

3.2.1 Landmark Finders

3.3.1.1 Prozygion/Mid-Temporal Fossa Finder

The prozygion (PROZ) falls on the height of the cheekbone and the

mid-temporal fossa (TEMF) falls just behind the bony frame of the Both fall on the zone crossed by the mask periphery (see Figure 1). A single instrument can find both points, since it is face size adjusted when placed just at the outer corner of the The distance behind that point which is available for the eye. mask periphery, is limited. Measurements determined that those points fall on a vertical axis exactly 1.5 cm behind the eye Corner (see Figure 2). The temporal fossa point is then 1.5 cm above the level of the eye corner, and the cheekbone point is 2.0 cm below it. Curvature of the instrument plate causes it to lie flat against the face. ILC engineers combined this instrument with two others (Sellion Finder; Menthon and Pogenian Finder) into a single unit thereby improving function without changing dimensions (see Appendix B).

3.3.1.2 Sellion Finder

The Sellion, the deepest point in the "saddle" formed by the nasal bones) is hard to locate without good training and anatomical knowledge. This instrument butts up against the frontal bone, thus positioning itself, and eliminates guesswork (see Figures 1 and 2). The hole centered on the curve of the device is consequently positioned correctly, and a mark is made on the skin through that hole.

3.3.1.3 Menthon/Pogonion Finder

This device works on the same principle as the sellion finder.

It is pushed up onto the chin at midline. A short flat blade (pushing on the floor of the lower jaw) stops it at the proper

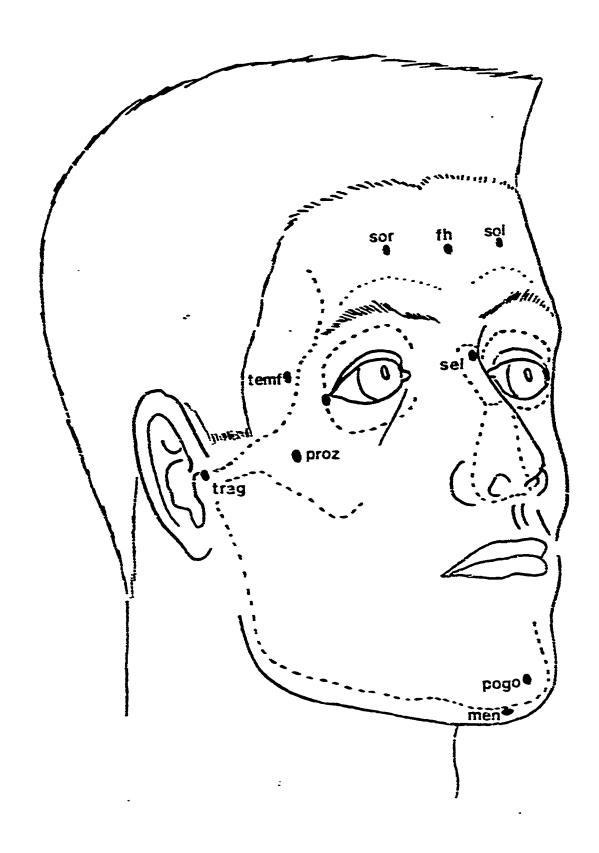


FIGURE 1
FACIAL LANDMARKS

location. Pogonion, the most anterior chin point, and Menton, the most interior chin point, are marked by means of holes properly placed through the instrument.

3.3.2 Other Anthropometry Aids and Specially Designed Instruments3.3.2.1 Tape Holder

The Tragion point (see Figures 1 and 3) is very difficult for an inexperienced technician to locate properly, and not much better for a professional anthropometrist. Consequently, a device was invented which finds a nearby point automatically. The body of this device is simply a set of stethoscope ear pieces. These fit into the auditory openings and self-adjust to the center of the canal. A tape then runs from one ear-piece, around the chin or forehead, and up to a washer on the other ear-piece. That way, arcs can be taken more quickly, easily, and with equal accuracy to the expert hand held tape method.

3.3.2.2 Metric Template

The object of this device is to get a single, fast easy reading of face circumference at the approximate location of the mask periphery. Using the basic pattern of a Medium Clear Template (which self-adjusts to chin and face), the template strap was cut at midforehead. On one side of the cut was added a bucklelike reading window, and the other side of the strap was increased in length and covered with a metric scale. The device is placed on the face and adjusted so that it conforms approximately to mask periphery location. (See Appendix E, Anthropometric Protocol

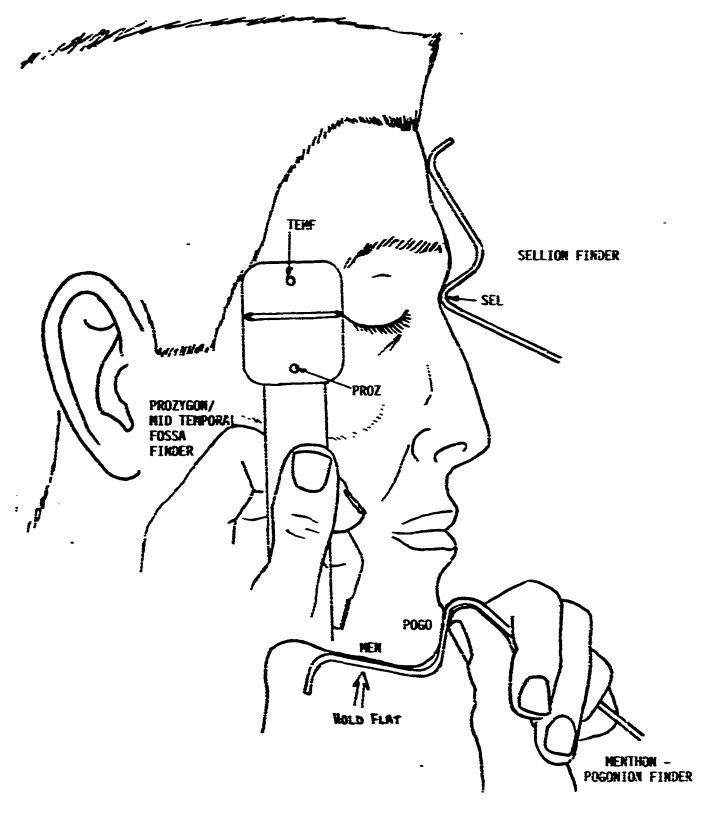


FIGURE 2
LANDMARK DETERMINATION DEVICE

for further details.) A single metric figure is then read off.

3.3.2.3 Gauge

The tool used in M-17 sizing was assessed for its value to XM40 sizing. This simple non-metric caliper was modified at ILC Dover by covering the dangerous points at the ends of the caliper arms with small disks and is discussed in detail in the previous section. All of the devices listed above were evaluated first in the ILC in-house conducted test and utilized in the anthropometric data collection at CRDEC.

4. ILC IN-HOUSE TEST

ILC conducted a three phase test to determine the inherent variability among measurers and to determine the degree of improvement in the accuracy of measurements after obtaining improved landmark devices and proper training by Dr. A.T. Steegmann.

4.1 TEST PROCEDURE

For each phase of the test, four measurers each measured three facial characteristics for a group of 30 subjects. The three measurements, which encompass all of the measuring devices used in the program, include; 1) face height (Menton-Selion); 2) face width (bizygomatic diameter) and 3) posterior jaw (bitragion-submandibular arc). The face height was measured with a sliding caliper which is illustrated in Figure 4. Face width was measured with a spreading caliper which is illustrated in Figure 5.

Posterior jaw was measured with a tape and the process is illustrated in Figure 6. During the first phase of testing measure—ments were obtained freehand in which no landmark devices were utilized or formal training given. Measurements were located according to both written and pictorial direction. (See Appendix

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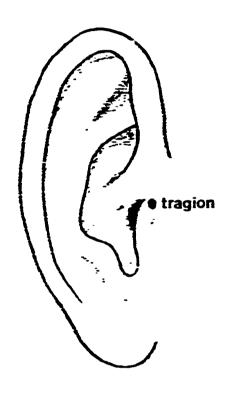
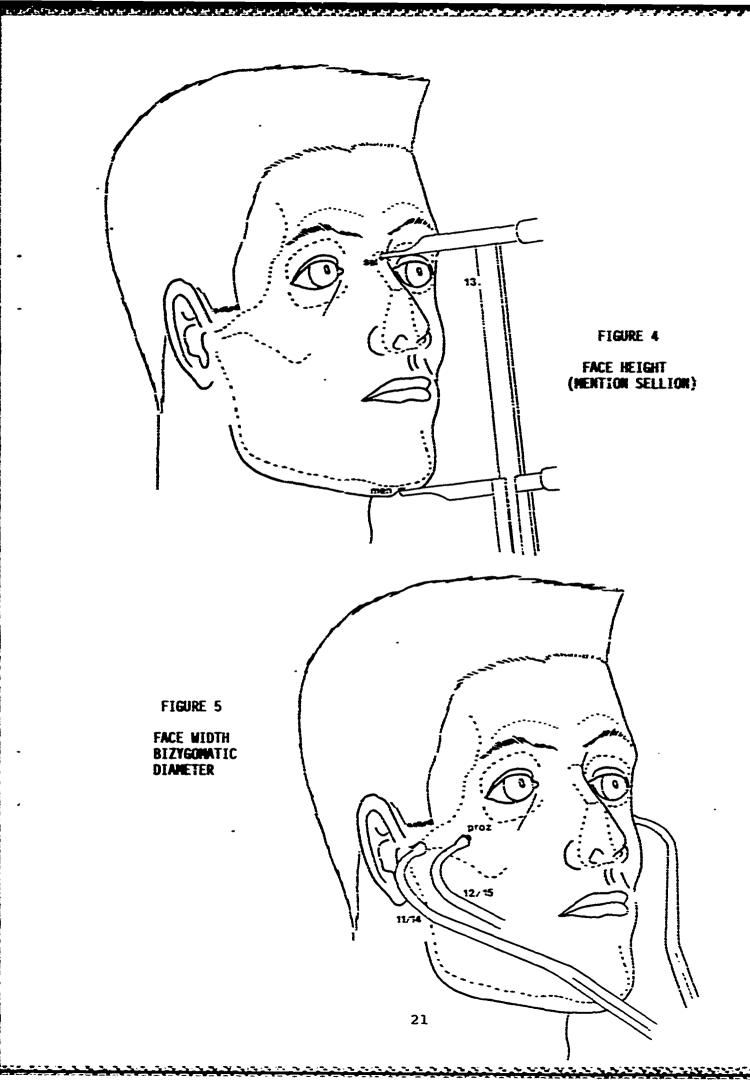


FIGURE 3
TRAGION LOCATION



D.) During the second phase of testing, measurers were given landmark devices to aide in locating the correct points of measurement. Once again, no formal training was given and use of the devices was learned according to written and pictorial direction. For the third phase of testing, measurers were given formal training by Dr. A. T. Steegmann on the proper use of the landmark tools and measurement technique.

4.2 ILC TEST RESULTS

Raw data is presented in Appendix D in tables. Tables El through El2 present ine data for each measurer for measurements for all 3 test phases for all 30 subjects measured. Tables El through E4 are for face height for measurers 1 through 4 respectively. Tables E5 through E8 are for posterior jaw and Tables E9 through E12 are for face width.

4.3 DATA ANALYSIS BY BATTELLE

Raw data was turned over to Battelle to perform a formal data analysis. It was determined that there is no single best way to analyze the data collected in this study. After careful consider – ation of various alternatives, it was decided to use a two way analysis of variance with the factors, measurer and subject being random rather than fixed factors. The output of such an analysis consists of estimates among subject standard deviation and among measurer standard deviation. Using this conceptual analysis model the four measurers were treated as random selections from among a population of available measurers. Similarly, sub-

jects were considered as random selections from among a population of available subjects. It is realized, of course, that this model does not conform to reality, but it nevertheless, is the most appropriate content—with which to obtain what what was needed from the data. It is not unusual to "force fit" an experimental design into the scaffolding of this random model. In most experimental situations, it is impossible to randomly select from among all conceptual candidates. The model, however; does prove useful in spite of such stretching of assumptions.

Discussion of Results

The analysis of variance results are presented in Table 5. The Table entries in the upper section are standard deviations. For example, the first entry. 4.23 is the standard deviation among measurers for face height. that value, the 9.36 is the corresponding standard deviation among subjects. A pertinent ratio ratio of these two standard deviations. The entry for the second section in the same column, 45, is the measurer variability as a percent of the variability among subjects. In this case the variability among measurers is almost half as large as the variability among subjects being measured. High values for this quantity could be indicative of a measuring process which is inherently of low accuracy. Finally, the calculated value of 6.03 which has not so far been mentioned is an estimate of the inherent scatter in the data after adjustment for subject and measurer effects. The quantity which estimates this error is the product of measurer and subject interactions. These interactions are typically assumed to be non-existent so that the number one obtains for the interaction calculation is simply due to random scatter. This is a common assumption in this type of data. This assumption made for this data, replicates by the same measurer(s) on the same subject(s), are required to test the non-significance of this interaction and such replications were not available in this study.

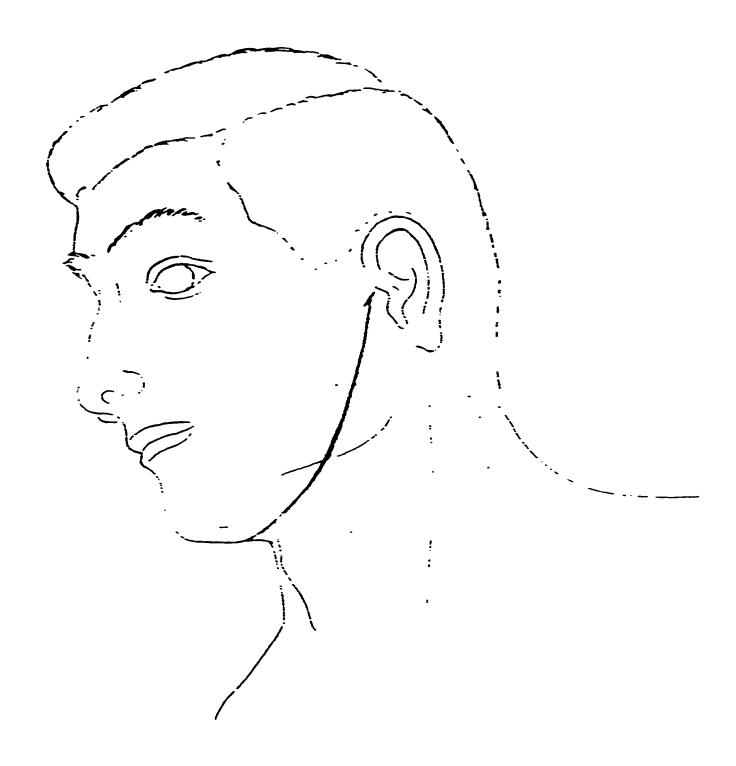


FIGURE 6

POSTERIOR JAW CIRCUMFERENCE (BITRAGION SUBMONDIBULAR)

Overall it appears that of the three measurements, the posterior was most precisely measured as evidenced by the comparajaw tively low values for measurer variability as a percentage of subject variability, namely 30, 26 and 20 percent. The least precise was face width (spreading caliper). Here measurer variability ran from 71 percent to 143 percent of subject The 143 percent value for the landmark measurement variability. is especially surprising since it implies that there i variability in the measuring process than among the subjects of that process. Face height as measured with the sliding caliper was just slightly more variable than posterior jaw.

It is also interesting to compare the three levels of measurement within each category, namely freehand, landwark and trained iandmark. These three categories essentially represent, in order, three levels of training for the measurers. Freehand has least training followed by landwark where facial landwarks are located with special templates followed by trained landwark where landwarks are used and training is given in their proper use. For all three measurements, the error term for landwark is lower than that for freehand indicating that the landwark has removed variability from the system. Trained landwark, however, is smaller than landwark only for face height.

TABLE 5. ANALYSIS OF VARIANCE RÉSULTS FOR ILC DOVER FACE ANTHROPOMETRIC STUDY

				Standa	rd Devi	atiens			
		<u>iceheig</u>		Pos	terior	Jaw	<u>Fa</u>	cewidt	
Yariance Components	F(a)	L(b)	TL(c)	F	i.	TL	F	L	TL
Keasurer	4.23	2.99	1.97	6.33	4.84	3.95	3.98	6.57	3.50
Subject	9-36	9.81	8.18	21.45	18.41	19.97	5.48	4.61	4.91
Frror (Interaction)	6.93	3.67	3.27	12.00	9.25	10.15	4.44	3.2l	4.11
<pre>Keasurer variability (std. dev.) as percent of subject variability, percent</pre>	45	30	24	30	26	2 G	73	143	71

⁽a) Freehand.(b) Landsark assisted.(c) Trained landmark.

Another way it look at these results is to compare the three categories for the last row. Here for face height and posterior jaw measurer variability decreased when going from freehand to landmark indicating the usefulness of landmark templates for these two measurements. The opposite result for face width is surprising since it indicates that use of the template actually increased the measurer variability relative to subject variability. With training the landmark result fell back to the level for the ireehand result.

In conclusion, these results indicate that the variability among the measurers represents a significant parcentage of variability of the subject population. Therefore, indicating that the error induced by the variability of the measurer will have a significant impact on the selection of the best fit mask using facial measurements. In addition, use of landmark devices reduces error over freehand measurement, however, it is inconclusive as to whether or not formal training improves variability and reduces error.

5. CRDEC TEST

An anthropometric study and protection factor performance study was conducted in order to determine the combination(s) of measure ments to be used to accurately predict the best mask size for a population greater than that which is predicted by the Technical Manual Method. An additional goal of this study was to determine

the most reliable method or technique of obtaining these measurements.

5.1 TEST FACILITY/EQUIPMENT

In order to conduct an anthropometric survey in conjunction with a protection factor performance study, a mobile protection factor chamber was designed and fabricated.

It was the initial intent to conduct the study at Dover Air Force Base, however, lack of participation from the subject population caused termination of testing at this facility. It was then decided that the cest would be conducted in Bldg. E5604 Edgewood Area, Aberdeen Proving Ground, MD. The testing was performed by the Individual Protection Division, Physical Protection Directorate, of the Chemical Research, Development, and Engineering Center and personnel of ILC Dover.

5.2 TEST PROTCCCL

Anthropometric and photographic data were collected on each subject by a trained ILC technician. CRDEC personnel then assigned each subject to the optimum mask size according to the standard TM-method, (a subjective evaluation of factors such as peripheral location of the face where the eyes are located relative to the eye lenses, in order to collect protection factor (ratio of outer concentration of contaminant to inside mask concentration of contaminant). In addition, protection factor data was collected while wearing a mask of the next appropriate size. The same protocol was used for the ILC and Scott XM40's, and the Avon S-10.

5.2.1 Test Program

A test population consisting of 114 soldiers was used for this evaluation. The subjects arrived at the test facility in groups ranging in size from 10 to 24 soldiers. Upon arrival at the test facility the subjects were briefed on the purpose of the testing and what was exacted of each of them. After the orientation the subjects were a zed in each of the mask systems. The sizing involved subjectively determining the correct mask size and also determining the next most likely size that the subject would wear. Once the sizing was completed the subjects received a brief training session to instruct them in the proper domning procedures for each of the mask systems. Once the training was completed the testing began.

The subjects were given a mask which they donned prior to entering the chamber. Since the subjects were only available for a
limited time, adequate training was not possible, so CRDEC
personnel assisted the subjects in donning the mask to minimize
the effects of training and learning. Once the mask was donned
the subjects would enter the test chamber and a fit test was
conducted. At the completion of each fit test the subjects were
photographed from the front and side for a visual record of how
each mask fit. During the course of the of the day, subjects
would have their anthropometric measurements and bare face photographs taken.

Each subject was tested a total of six times (once in each of the two mask sizes assigned in each of the three mask systems) and sixteen anthropometric measurements were taken. The data was then fed into a computerized data base for analysis and the photographs were compiled into an album for easy reference during the analysis of the data.

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5.2.2 Anthropometric Protocol

The anthropometric protocol was developed by Dr. A.T. Steegmann and is detailed in Appendix E. One ILC technician was thoroughly trained in the procedure described in Appendix F and closely supervised during the first day of testing. The same technician collected all anthropometric data.

A total of sixteen anthropometric measurements were collected for each subject and are listed below:

- 1. Height
- 2. Weight
- 3. Adjustable Metric Template Circumference
- 4. Seb-mandibular Skinfold
- 5. Bitenforal Fossa [TEMPF] Minimum Frontal Arc. [Temporal Forehead Arc]
- 6. Biprozygomatic Menton Arc [Cheekbone-Chin Arc]
- 7. Sitiagion-Hinimum Frontal Arc (Freehand). [Ear Forehead Arc]
- 8. Bitragion Pogonion Arc (Freehand). [Ear-Chir Arc]
- 9. Bitragion Minimum Frontal Arc (Tape Holder). [Ear-Forehead Arc.]
- 10. Bitragien Pogonion Arc (Tape Holder).
 [Ear-Chin Arc]
- 11. Bizygonatic Diameter (Calipers). [Face Width]
- 12. Biprozygomatic Diameter (Calipers). [Cheek bone Width]

- 13. Menton Sellion Diameter (Calipers). [Face-Height]
- 14. Bizygomatic Diameter (Gauge). [Face Width]

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- 15. Biprozygomatic Diameter (Gauge). [Cheekbone Width]
- 16. Menton-Sellion Diameter (Gauge). [Face-Height]

The actual choice of these measurements was determined by means of their usefulness in previous studies and tests in this series and by the characteristics (periphery, contact areas, nosecup, etc.) of the XM4C.

5.2.3 Corn Oil Test Method

A challenge concentration of approximately 25 mg M- of corn oil in the form of a polydispersed aerosol having a mass mean aerodynamic diameter (MMAD) of 0.5 - 0.6 microneters is generated in 4 ft x 6 ft x 7.5 ft chamber. The challenge test chamber atmosphere is generated by atomizing the liquid corn oil at room temperature using a Laskin nozzle. The Laskin nozzle produces a course aerosol cloud which is sent to an impactor plate which removes the larger particles and yields an aerosol in the desired particle size range. The aersosol concentration in the chamber is controlled by diluting the concentrated aeroscl from the generators with room air. The leakage of aerosol into the respirator is measured by continuously sampling at a rate of 1 liter/min from inside the respirator facepiece. Sampling is accomplished through a length of tubing that connects the sample port in the mask to the photometer. A five-decade light scattering photometer is used to analyze and quantify the leakage of aerosol into the mask by measuring the amount of light scattered by aerosol particles in the sample stream and converting it to a voltage. The signal is then digitized and recorded on flexible discs.

The leakage of the aerosol was measured while the following exercises were performed:

- (a) Normal breathing
- (b) Deep breathing

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- (c) Head movement, side to side
- (d) Head movement, up and down
- (e) Talking (recite the rainbow passage)
- (f) Sight a rifle
- (g) Touch floor and ceiling
- (h) On hands and knees, look up right and left
- (i) Facial expressions (yawn, smile, frown, and rotate the chin)
- (j) Normal breathing

Each exercise was performed for one minute.

5.3 TEST DATA

Test data was accumulated by CRDEC (see appendix G) and was sent directly to Battelle for further analysis.

5.4 DATA ANALYSIS

Extensive data analysis was performed in order to determine the ability of the accumulated data base to be utilized for the selection of anthropometrics as sizing determination predictors.

A correlation analysis was conducted in order to assess the

relationship of one facial measurement to another. Methods
of measurement were examined comparatively using a sensitivity
analysis. In addition, a cluster analysis and principle component
analysis were performed on the data to determine how well selection of a few key facial measurements will predict mask size.

Prior to conducting any data analysis to select the key anthropometrics, a "correct" or "true mask" size standard was established. Ultimately three different estimates of "correct" size were used: 1) TM, 2) PF, and 3) BF.

TM is the mask assignment made by the standard Army fitting manual (TM3-4240-300- baseline mask size assignment). The main objective of utilizing this standard was to see whether a simple anthropometric method could assign fit more accurately than this method.

PF is the mask assignment made by the maximum protective factor of each mask. Because the top of the range of variation of PF performance could not be recorded on available physiological equipment, this standard is hard to interpret. That is, if a subject achieved protection at a value of 20,000 in both small and medium masks (a frequent occurrence), it is not clear which size is optimum by this method alone.

BF is a combined measure including elements of the preceding two.

The "best fit" is one in which the mask periphery fell free of

all hair-lines, in which the nose cup was comfortable, where vision was acceptable, and PF performance was optimum. The problem with BF is that it may be the best overall method, but it is too subtle and multivariate to expect prediction by simple anthropometrics.

Preliminary discriminant analysis was performed on the data in which the TM standard of correct mask size was based on a set of facial measurements. The TM, PF, and BF standards of correct mask size were all used to present the data in the form of boxplots. These boxplots were then used by Dr. A. T. Steegmann to determine S-M-L predictors for the anthropometric measurements. Finally the PF standard was used for a size line analysis in which the PF was optimized for the mask size distribution determined from the anthropometric measurements.

5.4.1 Correlation Analysis of Facial Parameters

The inter-correlations of the 13 different facial measurements were analyzed. All possible correlations are presented in Table 6. Here the facial measurements are shown both as rows and columns. The intersection of a row with a column contains the correlation coefficient (multiplied by 100) between the two vari-

ables corresponding to the row and column labels. For example, the correlation coefficient between skinfold and facesize is shown in the upper most cell and is 0.25 (i.e. table entry multiplied by 0.01 to transform back to 0-1 scale). A perfect linear relationship would result in a coefficient of +1 or -1 and the complete absence or a correlation would be indicated by zero. Of course, due to random variability, zeroes and ones are seldom obtained. To get a feel for the significance of the correlation coefficients, one should square the coefficient and multiply by 100. This number is the percentage of the variability in one of the variables which can be explained by the other. For example, a correlation coefficient of +\- 0.5 indicates that 25 percent of the variability in one variable can be explained by variation in the other. A correlation coefficient of 0.9 similarly would indicate that 81 percent of the variability in one variable is explainable by the other, etc... The sign of the correlation coefficient is indicated by the direction of the association. For example, a positive coefficient indicates that as one variable is increased (or decreased) the other variable increases (decreases) .

5.4.1.1 Discussion of Correlation Matrix

An interesting aspect of this table is the relatively low correlation coefficients obtained for the same facial measurements made two different ways. For example, the correlation between the ear-chin arc measured with tape only and tape plus holder is

Thus 26 percent (i.e. (1-r) x 100) of the variability in one is unexplained by the other. This appears surprising since the only difference is the holder for the tape. A scatter plot of these two variables is shown in Figure 7. Overall the measurement showing lowest correlation with other variables is Such low correlations could be due to the skinfold skinfold. measurement being largely independent of the other measurements which would be a good outcome. The other explanation is that skinfold is not a very reproducible measurement. Other results in this study lead us to accept this as the reason for low correlations. Many of the low correlations shown in this table are for correlations between the various measurements of face width These correlations are all below 0.4 and and face height. indicate that face height and face width tend to be independent This is probably one of the reasons that face of one another. height + face width turned out to be one of the best discriminators for mask size determination. A scatter plot for these two measurements is shown in Figure 8.

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	2	و	Temple-Forehead Arc	Cheekbone.Chin Arc	Ear-Forehead Arc	. Ear-Chin Arc	- Ear-Forehead Arc	Ear-Chín Arc	- Face Width	- Cheekbone Width	- Face Height	- Face Width	Cheekbone Width
	Face Size	Skinfold		•	•			•	SPC - F	SPC - C	s.c. F		
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Skinfold	25				!							<u> </u>	<u> </u>
™ - Temple-Forenead Arc	44	1								I • •		<u>;</u>	
TM - Cheekbone-Chin Arc	79	25	52								;		
TO - Ear-Forenead Arc	54	24	55	4 3		ı					i		:
70 - Est-Chia Arc	59	37	4 3	31	53								•
TH - Ear-Forenead Arc	54	25	61	45	90	52					i :	:	
TH - Ear-Coin Arc	53	29	. 59	: 31	52	96	52		! !	<u>.</u>	: !		:
SPE - Face Width	± 0	32	32	43	62	53	58	52		<u>:</u>		<u>i</u>	<u>:</u>
SPE - Cheekbone Width	= 2	24	53 	: 53	52	33	57	53	34	:	:	•	;
QC - Face Height	72	-12	40	72	33	49	34	53	13	25		:	,
MG - Face didth	41	37	41	52	59	55	54	55	. 35	32	20	•	
VG - Cheekbone width	÷9	29	47	55	57	. 33	50	57	! 75	37	34	: 77 :	·
MS - Face meight	75	-4	32	72	30	51	31	47	12	22	37	20	27

TM = Tape and marker tool TO = Tape only Abbreviations:

TH = Tape and nolder SPC = Spreading calibner SLC = Sliding calibner MG = Metric gauge

Note: All entries are correlation coefficients X 100.

FIGURE 7. SCATTER PLOT FOR EAR-FOREHEAD ARC MEASURED WITH TAPE AND HOLDER AND TAPE ONLY

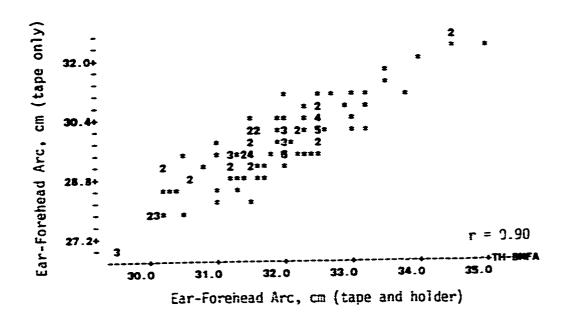
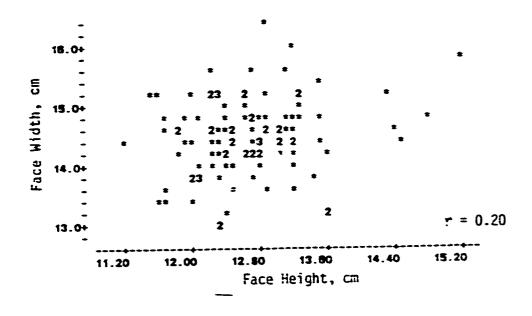


FIGURE 8. SCATTER PLOT FOR FACE HEIGHT VERSUS FACE WIDTH BOTH MEASURED WITH METRIC GAUGE



NOTE: PLOTTED NUMBERS INDICATE NUMBER OF OVERLAPPING DATA POINTS

5.4.2 Sensitivity Analysis

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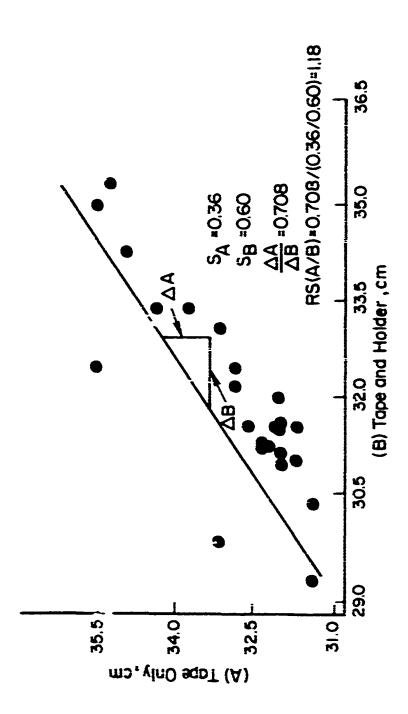
During the course of this program a number of devices for performing facial measurements were utilized. These included (1) metric gauge, (2) spreading caliper and (3) tape with or without a holder. In order to assess which of these was most accurate, Mandel's sensitivity analysis was performed for selected pairs of test. Mandel's sensitivity analysis correctly recognizes that two tests which measure the same underlying quantity should be compared not only on the basis of their standard deviation (i.e. test precision) but must also take into account the comparative range of measurements for tests being compared. For example, suppose test A and test B both measure the same quantity. test A exhibited twice the standard deviation (half the precision) as test B it is often concluded that test B is "better". if the range of measurements obtained for test A However is three times greater than that obtained for test B upon measurement of the same specimens, then this must also be taken into That is precisely what Mandel accomplishes with his sensitivity ratio. He defined the sensitivity ratio of test A relative to test B as follows:

$$RS(A/B) = (\Delta A/\Delta B) \div (S_A / S_R)$$

Here $\Delta A/\Delta B$ is the slope of a regression line fitted to data where measurements were made for both tests on each subject. S_A and S_B are the standard deviations of the two tests and come from measurements on identical subjects at different times. Figure 9

illustrates these quantities. If the sensitivity is greater than one this indicates that test A is favored. If it is smaller than one, then test B is favored. Due to random scatter in the data, such decisions are made only when the difference from 1.0 is sizeable.

Table 7 presents results of the Mandel sensitivity ratio applied to four pairs of measurement methods. In the first case the spreading caliper (A) is compared to the metric gauge (B) for measurement of biprozygomatic diameter. The sensitivity of 0.77 indicates that the metric gauge is favored. In the second case the same two tests are compared relative to measurement of bizygomatic diameter. In this case the sensitivity is near unity indicating equal utility of the tests. The third comparison is for sliding caliper (A) versus metric gauge (B) for measurement of menton sellion distance. The sensitivity of 1.09 indicated that sliding caliper may be the better method although the dif from ference 1.0 is probably not statistically Finally the utility of a tape holder was evaluated significant. for bitragion pogonian arc measurements in item four where test A corresponds to tape and test B corresponds to tape with a holder. The sensitivity ratio of 1.18 indicates that the tape holder degrades the quality of the measurements.



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FIGURE 9. RELATIVE SENSITIVITY OF TWO MEASUREMENTS OF BITRAGION POGONIAN ARC

Table 7. Comparison of Measurement Techniques

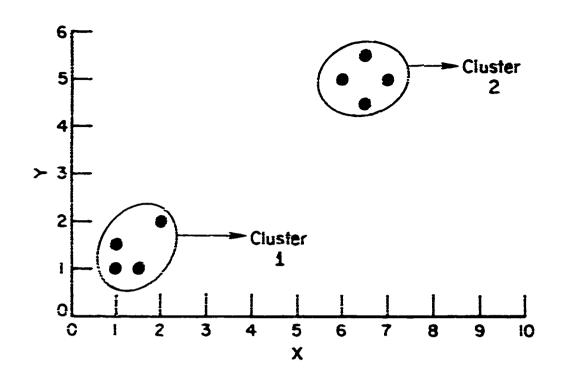
MEASUREMENT	TEST A	TEST B	RS(A/B)	FAVORED
Biprozygomatic Diameter	Spreading Caliper	Metric Gauge	0.77	В
Bizygomatic Diameter	Spreading Caliper	Metric Gauge	1.04	A or B
Menton Sellion	Sliding Caliper	Metric Gauge	1.09	A?
Bitragion Pogonian Arc	Tape	Tape and Holder	1.18	A

5.4.3 Cluster Analysis/Principle Component Analysis

In order to determine how well a given selection of anthropometric data can predict mask size, a cluster analysis and principle component analysis were conducted.

5.4.3.1 Cluster Analysis

Cluster analysis can be defined as the classification into groups of objects, characterized by their quantitative or qualitative properties. For example, consider the fictitious data plotted in Figure 10. Here synthetic data are plotted for variables "X" and "Y". It is clear that these "data" fall into two distinct groups or clusters. Identification of such clusters could conceivably be useful in assignment of mask sizes. For two variables as shown here the separation of the two clusters is clear just from plotting the data. When the number of variables increases, however, graphical methods are not efficient for cluster identification



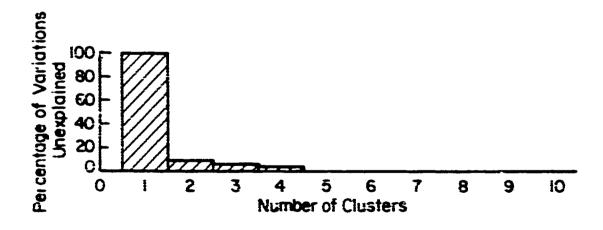


FIGURE 10. ILLUSTRATION OF CLUSTER ANALYSIS

and mathematical methods of cluster analysis must be used. The bottom figure in Figure 10 shows the percentage of remaining unexplained variation as a function of the number of clusters.

Note that for one cluster, ie.. all of the data, all of the variation is unexplained by the cluster segments. For two clusters, however; only four percent of the data are unexplained. Little reduction is seen for three or four clusters illustrating that two clusters is "optimal" in an undefined sense. This description will be helpful in explaining the more complicated case to follow.

Cluster Analysis of Facial Measurement Data. The data for facial measurements of all subjects was subjected to cluster analysis and the results are presented in Figure 11. Here it can be seen that there does not appear to be a small subset of measurements which can be substituted for the large number of measured quantities. After subdivision into three clusters the unexplained variation is still nearly 50-percent. Addition of variables reduced this percentage only very slowly. These results tend to refute the hypothesis that there exists a small number of variables which describe facial characteristics.

5.4.3.2 Principle Component Analysis

In this study 14 measurements were made on the faces of the subjects. It would be quite unusual if all of these measu ments were uncorrelated. In fact it is to be expected that high levels of correlation would be the rule rather than the exception. With

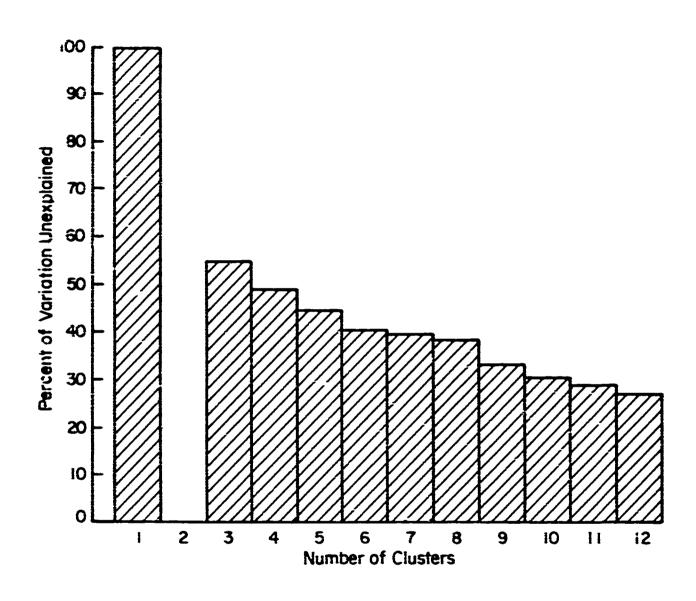


FIGURE 11. CLUSTER ANALYSIS RESULTS FOR FACE MEASUREMENTS AND OTHER SUBJECT DATA

such data it is frequently useful to attempt to find fewer uncorrelated composite "measures" with little loss of information content. If it were found that a few composite measures contained nearly as much information as the individual measurements, then the composite measures and the individual measurements which constitute them might be the basis for the design of a face mathematical/ statistical tool which searches for such uncorrelated composite measures.

without going into detail of how principal components works, the form of the output will be described. The output consists of a list of principal components along with the percentage of the variance which the corresponding component explains. In addition the composition of each principal component is presented as a column vector which corresponds to an eigenvector of the correlation matrix of all measurements. This vector simply amounts to a weighted average of the individual measurements which corresponds to the principal component. For each subject then the weighted average of the measurements would correspond to a principal component score for that subject and that principal component. (For an example of a principle component analysis see Appendix C).

Principal components analysis was run for facial measurements.

The variance contribution results are presented in Figure 12.

Here the first component, which had all positive signs and therefore corresponded to a measure of size, explained 54.7

percent of the variability. The second which corresponded to a measure of shape explained an additional 15.9 percent. None of the others accounted more than 10 percent. These results are predictably similar to those for cluster analysis and they suggest the absence of a few key measurements which can be used to size masks.

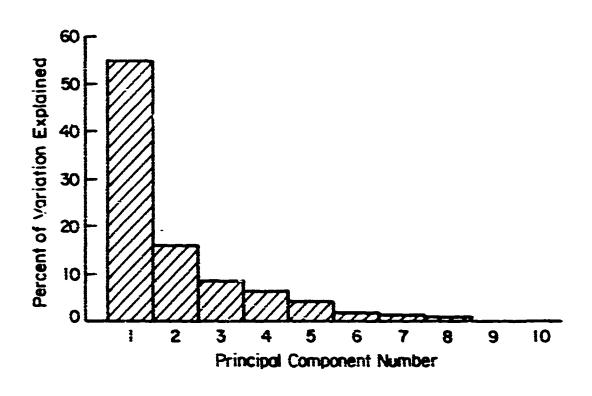


FIGURE 12. PRINCIPAL COMPONENT VERSUS EXPLAINED VARIANCE

5.4.4 Discriminant Analysis

In statistical terminology, multiple discriminant analysis is appropriate when the dependent variable is categorical and the independent variables are metric. In the context of this program, the dependent variable is "true mask size" which is small, medium or large; and the independent variables are the various facial measurements along with weight. The purpose is to assign the "correct" mask size given a set of facial measurements along with the weight of the subject. Discriminant analysis was originally proposed as a possible solution to the mask sizing problem cited in CRDEC-TR-87045. Based on a series of facial measurements, "correct" mask size was predicted. In these trials discriminant analysis resulted in correct classifications as high as 85-percent. The "correct" mask size for each subject was the result of an expert assessment. Theoretically, if a limited number of facial measurements could be used to predict mask size, then it might be possible to design a simple tool which would take these key measurements into account with one measurement operation.

Discriminant analysis was run on the available data after 48 subjects had been tested. The resulting percents of correct classification were 67, 58 and 71 percent for Scott, ILC and Avon masks respectively (some testing reported in CRDC-TR-85) utilized the Avon US10 mask). For statistical reasons it is unlikely that the results would be better for a large sample size. This is one reason that discriminant analysis of the data were not run after

all of the data were collected. A more fundamental reason, however, is that discriminant analysis is not completely appropriate for the task.

Discriminant analysis assumes that each subject fits one and only one mask size. This is clearly an incorrect assumption for the mask sizing situation since in some cases subjects can wear two different sizes with equal protection. In fact it is not unusual for some subjects to successfully fit into all three sizes.

Even with this problem it would be possible to force fit the discriminant analysis. This could be done by considering the following set of possibilities: S, M, L, S-M, S-L, M-L, S-M-L, where S stands for small, M for medium and L for large. In this case each set of sizes constitutes a category. However, this is inappropriate because for each subject only two of the three mask sizes were evaluated in the trials conducted in this program.

Another problem with discriminant analysis in the context of mask sizing is the absence of judgement as to possible ratios of facial measurements. It is not unreasonable to assume that selected ratios of facial measurements may be more predictive of mask size than computer-selected linear combinations of these measurements. It was therefore decided to abandon discriminant analysis and evaluate other methods which could more

easily incorporate assessments of appropriate measurement ratios by the anthropometry expert on the project.

5.4.5 Boxplot Analysis for Size Determination

Boxplots alternatively called box and whisker diagrams were developed by Tukey to enable concise visual comparisons of different data sets. They were used extensively in this study to condense large amounts of data and also, by Dr. A.T. Steegmann Jr., to assign "cutting points" for deciding between two continuous mask sizes.

5.4.5.1 Boxplot Description

154332222

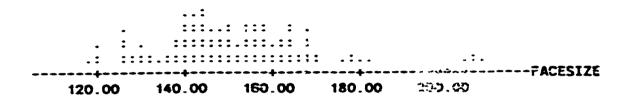
Particular Series

Figure 13 illustrates three ways to represent a batch (to use Tukey's terminology) of data, a histogram, a dot plot and a boxplot. The data used for the example is for face size in cm. The first representation is a histogram which shows the number of measurements falling into various size categories. For example, four measurements fell into the interval centered at 120 cm., 13 fell into the interval centered at 130 cm. etc. Since these center points are 10 cm apart, the interval widths are 10 cm. Therefore the smallest four measurements centered at 120 cm fell in the interval between 115 and 125 cm. The 13 measurements centered at 130 cm actually fell between 125 and 135 cm etc. Histograms such as this show the nature of the distribution of measurements.

The second figure is a dotplot of the same data. A dotplot is

Histogram of FACESIZE N = 113

Midpoint	Count	
120	4	****
130	13	******
140	28	**********
150	25	********
160	25	*********
170	9	******
180	5	****
190	0	
200	1	±
210	3	***



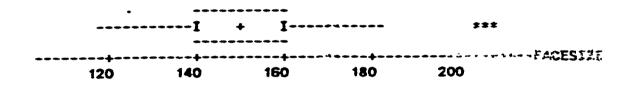


FIGURE 13. HISTOGRAM, DOTPLOT AND BOXPLOT FOR FACESIZE

similar to a histogram with the exception that the axis is divided more finely. This enables a better depiction of the distribution.

Each single dot represents a single datum. A colon, : , is used in a printing position to represent two data points.

Finally the third figure is a boxplot of the same data. The boxplot consists of three features, a box, two whiskers and outlying values. These are labeled in the figure. The box has a ÷ sign within its boundaries. This represents the median of the batch of data and in this example falls at approximately In most textbooks the median is illustrated by a 150 cm. vertical line running from one side of the box to the other. The median is the value which dichotomizes the data such that half of the c' ervations lie above the median and The two boundaries of the box are called the lower upper fourths. These are similar to the 25th and 75th percentiles of the data. Approximately one fourth of the data lie between the median and the lower or upper fourth. Therefore roughly 50 percent of the data fall within the limits demarcated by the box. The lower and upper whisker (i.e. straight lines emanating from each end of the box) each span an interval which includes again approximately one fourth of the Finally, the outliers, shown by *,s are data points which deserve special attention as they appear to exceptionally large or small. These may represent measurement or recording

errors or simply unsually small or large faces. By comparing the boxplot with the dotplot it can be seen that the boxplot preser es essential features of the empirical distribution of values in a very compact display. It is especially useful when several batches of data are to be compared side by side. For example, Figure 14 shows a boxplot for facesize for subjects which have been assessed by TM procedure to be "small", "medium", and "large" with respect to the most suitable mask.

5.4.5.2 Box Discriminators

Utilizing boxplots such as those shown in Figure 14, S/M and M/L dividing points were recommended by Dr. A.T. Steeg ann. Basically if there is no overlap for a given measurement between the three sizes, prediction would be 106%, and if all three sizes showed the same measurement distribution, predictive power would be 0. Usually, the result was somewhere between. This allowed lines to be drawn directly on the diagrams at the points of best separation of the three sizes. Each line (i.e., S/M or M/L) consequently could be given a metric value. The best results came with variables constructed by adding two anthropometric dimensions utilizing the TM standard as the true size. The five recommended predictors are summarized in Taple 3. Boxplots for these bivariate predictors are shown in Figures 15-19. As evidenced by these boxplots, even the "best" predictors have overlap indicating that some of the population will be incorrectly sized.

Recommendations for S/M and M/L dividing points utilizing each of the TM, PF, and BF standards for each of the masks (ILC, and Scott XM40, and Avon Mask) is detailed in Appendix H and summarized in Table 9.

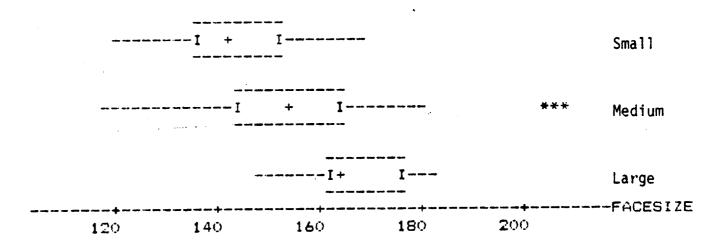


FIGURE 14. BOXPLOTS FOR TM FITS OF SMALL, MEDIUM AND LARGE MASKS (ILC DOVER MASKS)

TABLE 8
RECOMMENDATIONS FOR BIVARIATE PREDICTORS

Rank	Measurement #	Description	S/M dividing point	M/L Dividing Point
-	11 and 13 (calipers)	(Face Width + Face Height). This is the single bost set, and separates all 3 companies masks (Scott, better than Avon, better than ILC).	Clearly at 26.2 cm	Less well at 27.0 cm
2	5 and 6 (tape)	(Tample-Forehead Arc + Choek- bone-chin Arc). Separates all 3 companios' mask, but Scott > Avon > 11.C.	Very well at 44.3cm, ILC, 44.8).	Very well at 46.1 cm, ILC less clearly at that value
3	14 and 16 (gauge)	(Face Width + Face Height) saparates all 3 companies masks, but Scott > Avon > 1LC.	Very well at 26.7 cm, ILC 26.9 cm	Less well at 27.7 cm
4	12+1/2 (6)	<pre>(Cheekbone width + 1/2 Cheek- bon. chin Arc), separates all 3 companies' mask, but Scott > Avon > 1.C.</pre>	ILC very well at 26.0 cm, others less well at 25.8 cm	Less well at 26.8 cm, ILC badly
9	9 and 10 (holder)	(Ear-Forehead Arc + Ear-chin arc) separates all 3 companies' masks equivalently, but not strongly.	ILC at 63.0 cm, others at 62.7	Scott at 64.4 cm, Others at 65.2 cm

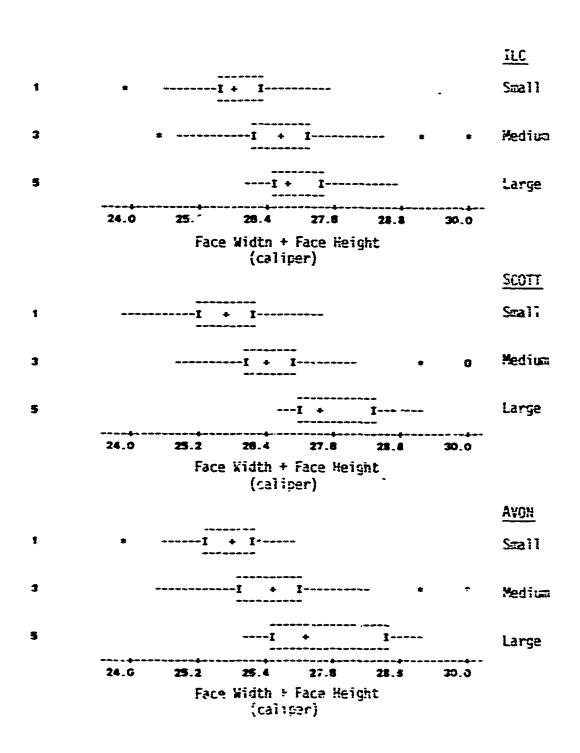


FIGURE 15. BOXPLOTS FOR FACE WIDTH AND FACE HEIGHT FOR THREE MASK MANUFACTURERS

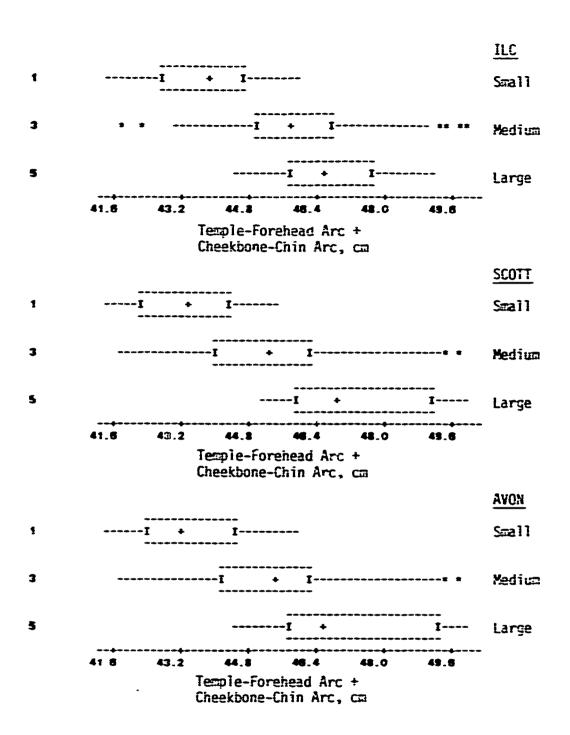
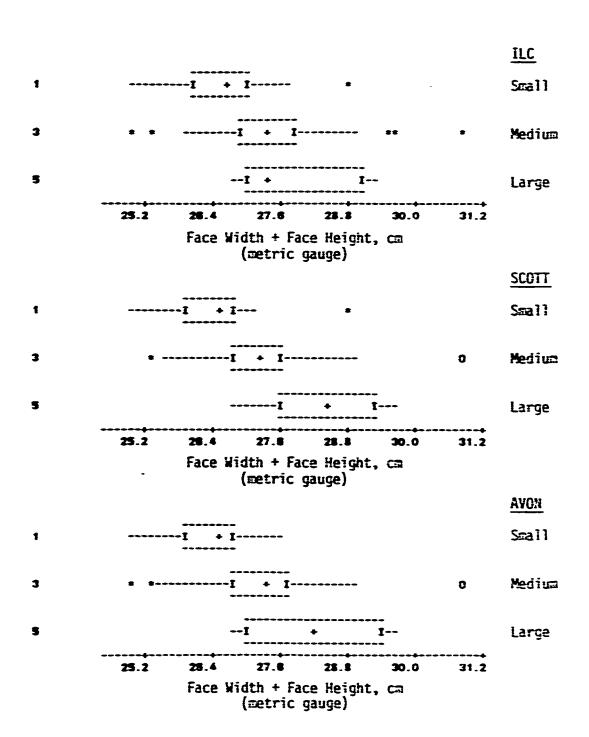


FIGURE 16. BOXPLOTS FOR TEMPLE-FOREHEAD ARC AND CHEEKBONE-CHIN ARC FOR THREE MASK MANUFACTURERS (TAPE AND MARKER TOOL)



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FIGURE 17. BOXPLOTS FOR FACE WIDTH AND FACE HEIGHT FOR THREE MASK MANUFACTURERS

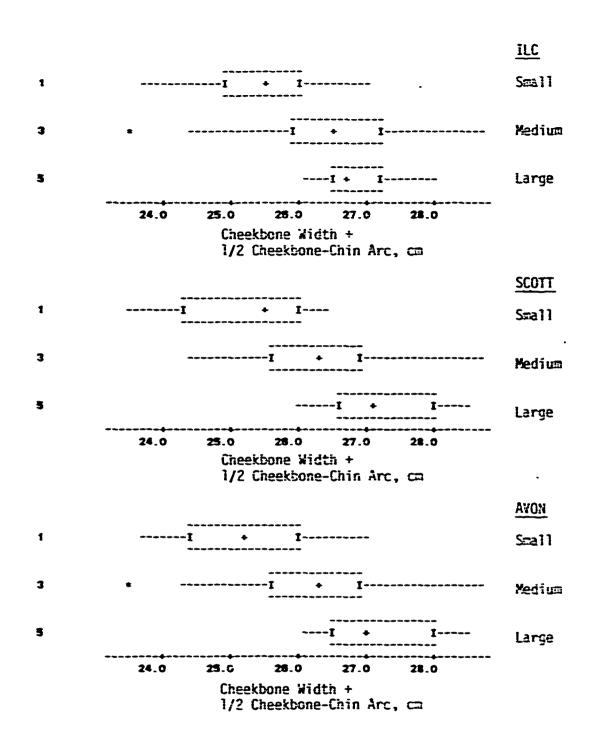


FIGURE 18. BOXPLOTS FOR CHEEKBONE WIDTH AND 1/2 CHEEKBONE-CHIN ARC FOR THREE MASK MANUFACTURERS

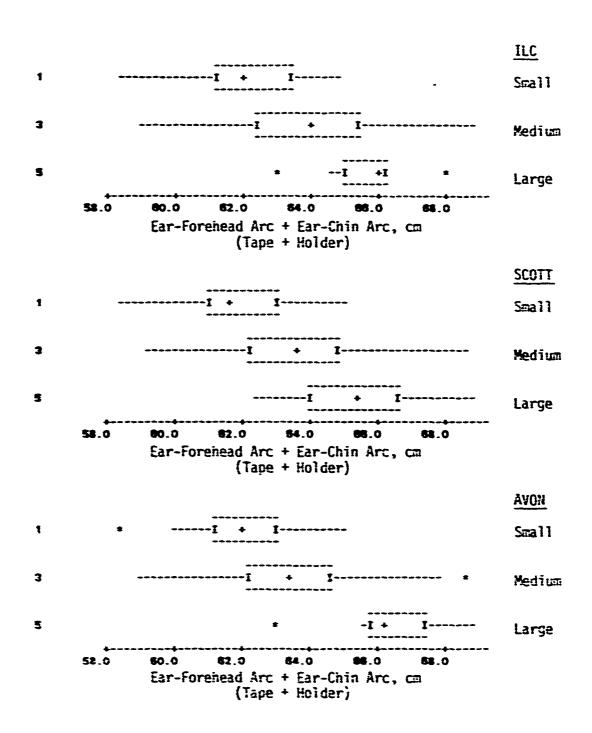


FIGURE 19. BOXPLOTS FOR EAR-FOREHEAD ARC + EAR-CHIN ARC FOR THREE MASK MANUFACTURERS

TABLE 9 DISTRIBUTION OF PREDICTORS

			TH FIE		Best	Bost Fit		Jed Ad	formation	
N.	ANTHROPOMETRIC VARIABLES	S)	\$C011	AVON	껡	30011	AVON	11.0 \$0011	SCOTT	AVON
	He lght	3	H /1.		77 47/ 5				7/0	
	Adj. Template	M/1.	S/M M/1.	M/1.		S/M	S/H			S/H H/1.
=	Sutmand. 5k infold									
ຄຸ	Temple-Forehead Arc	•	Ŧ,		¥			#/i.	ï\ ¥	
ؿ		8∕₩	S/H H/L	8/H	H/1.	S/M		¥,:	S/N	S/H
~	Ear-Frontal Ara (H)			M/t.		H/I.		J/WWH/S		S/H
ë.		H/L		H/t.			S/H			S/H
6		M / 1.								
9	Car-Chin Arc (H)	H/S		H/1.						
Ξ										
12.	Cheekbone									
±.			3/M M/L			8/H	S/H			
<u>.</u>			H/I.							
5.	Cheekbone Width (G)									
16.	Face Holyht (G)									
=	S. + 6. Tamp FH-Ck-Chin Ara	S/M M/l.	S/H H/L	S/M M/1.	M/1.			S/H#H/L	S/H	
7.	7. + 8. Er.FH + Er-Chin Ard	S/H H/I.		H/.	S/H H/L*		8/H		S/M	S/M
S.	+ 10, Er.FH + Er-Chin (H)	S/M M/I.		8/H M/I.						S/H
=	11, + 13, Facn Wd + Faco Ht.	S/M M/I.	S/M M/L	S/M H/L			N/S	₩/s		
=	16, + 16, " " " (G)	S/M M/1.	3/M M/L	S/M M/1.			8/H	H/I.		

* Poor discriminator

NOTC: S/M and M/L indicate that a miniamily acceptable cutting point between the specified masks was found in this cell.

S/H H/l.

3/M M/I.

S/H H/L

12. + 5 6. Ck Wd + 5 Ck-Chin Arc

S/H

美/s

These boxplots indicated that the best size predictor, from the perspective of the TM/BF/PF comparison is the TM approach.

That is, anthropometrics were more predictive of TM fit than of other methods. BF and PF were about equal (see Table 9).

Within the TM series, no single anthropometric variable approached reasonable levels of prediction for all three masks, though #3 (the adjustable template) gave cut-off points for medium/large in all masks, and #6 (cheekbone chin arc) likewise separated small/mediums across the board. Consequently, a single variable approach is not recommended.

within the TM series, combining pairs of anthropometric variables into single values proved to be the best approach for finding good discriminator points. The anthropometric pairs which are particularly recommended because the measurements themselves are simple, and with training, fairly accurate are \$11 + \$13, \$5 + \$6, and the forehead chin are using the stethescop. These measurements are outlined below.

- i) #11 and #13 (Face Width [Bizygomatic] + Face Height [Menton-Sellion] used as a single variable does the best job overall of S/M and M/L separation. It separates sizes best for Scott, next for Avon, and least well for ILC with S/M better than M/L.
- ii) \$5 and \$6 (Temple-Forehead Arc [Bitemporal Fossa-Minimum frontal Arc] + Cheekbone-Chin Arc [Biprozygomatic-Menton Arc]) is also a fairly good predictor. It works for three masks, but better in all three for S/M than M/L. However, these measurements do require the use of Temporal Fossa/Prozygion and Menton Finding Tools.
- iii) Forehead and Chin Arcs using the stethoscope like tape holder [‡9 and ‡10] shows less precision than the preceding two sets of combined variables. However, it is considerably faster, more foolproof, and easier than they are. In fact, with minor modifications, this tool could be improved for very easy use

and would not require landmarks at all.

In conclusion it was determined that several single and combined anthropometrics predict correct sizing fairly well, regardless of whether "correct" is defined by TM, BF, or PF criteria. However, even the best of them seem to reach correct assignment levels of only about 75 to 80%. This is below the 90% value which was the goal and which can reportedly be attained by trained technicians using the TM method. The reason for this prediction level probably relates to the fact that a mask fits well or poorly due to several variables, some of which are subjective. That is, the judgement of a fitter will include factors such as periphery/hair line relationships where anthropometrics alone will not.

5.4.6 Size Line Analysis

A size line analysis was also conducted on the data in which the dividing points for S/M and M/L for a given measurement or combination of measurements is set. Mask assignments were made and the percents of the population which would have a P.F. of 6667+ and 1667+ were determined. The dividing points were then moved to maximize these percentages. In addition, percentages which would be obtained if the TM method were used to size the subjects and if all the subjects were sized as medium were determined.

The mask assignments determined from the size line dividing points were then compared to the mask assignment which was made on the basis of the TM method. Assuming that the TM method

"correctly" sizes a mask, the number of subjects which were sized incorrectly was determined (by size).

Results for each mask, (Scott XM40, ILC XM40, and Avon US-10), are listed in Tables 10 - 12. Pie charts which depict the percentage mis-sized for each sizing method for each mask type may be found in Appendix J.

Basically all the measurements provide about the same PF percentages. Also, there is no significant difference in percentages between one measurement and a combination of measurements.

TABLE 10
Scott XM40 Size Line Analysis

Method	1667	6667		Lines M-L				
TM	. 90	· 76			20	54	9	
3	88			179 ized -				2
5	89		184 ber Res	204 ized -	22 12	_		2
. . . .	89		254 iber Res	281 ized -	24 13		4	3
7	90		251 ber Res		18 10		6 4	6
8	86			347 ized -	_		5 3	2
9	89			339 ized -	9 4	70 22	4 2	0
10	88		303 aber Res	338 ized -	17 8		4 2	ì
11	89			148 ized -		70 24	2	2
12	89			139 ized -		58 21	6 4	3
13	88			134 sized -				2
14	90			157 sized -		65 20	3	1
15	89			146 ized -		60 22		2
16	89			136 sized -	11 7	65 21		3
5+6	90			475 sized -	15 9	58 20	9 6	1
9+10	90			659 sized -	13 6	59 19		2
11+13	92			275 sized -			10 5	0

TABLE 10 (CONT)
Scott XH40 Size Line Analysis (Continued)

			Size Lines		Size Dist			‡ not
Method	1667	6667	S-4	M-L	S	M	L	Tested
12+1/2(6)	80	 7ප	251	279	13	63	5	2
		⇒ Num	ber Res	ized -	8	20	2	
14±16	89	78	261	281	12	59	11	1
		* Num	ber Res	ized -	5	15	4	
All Med	88	75			0	83	0	0
		* Num	ber Res	ized -	9	29	C	

^{*} Note: The Number Resized is the number of subjects in each of the sizes that were assigned a different mask size using the TM Sizing Method.

TABLE 11

ILC XM40 Size Line Analysis

Method	1667	6667						‡ not Tested
TM	74		- mber Res			51 		<u>-</u>
3	78			182 ized -		48 18		4
5	77			208 ized -		70 28		C
6	80			280 ized -		50 16		2
7	78			321 sizea -		63 25	3 2	3
8	81			351 sized -		62 28		1
9	72	61 * Nu	314 mber Res	341 sized -	20 7	66 26	3 2	Ž
10	?7	61 * Nu	304 mber Res	338 sized -	13 S	69 31	4 4	1
11	78			148 sized -		72 30		3
12	75			140 sized -				4
13	78			137 sized -				3
14	77			157 sized -				1
15	7.7			l46 sized -		57 22		5
16	7.2			137 sized -		55 24		5
5+6	79			485 sized -		54 19		1
9+10	77			673 sized -		66 26		1
13+13	80			291 sized -				1

TABLE 11 (CONT)

ILC XM40 Size Line Analysis (continued)

				Size Lines		e Di	st	‡ not
Method	1567	6667	S-M	M-L	S	M	L	Tested
12+1/2(6)	76	66	257	278	29	54	£	2
		* Num	ber Res	ized -	10	19	5	
14+16	76	60	268	289	28	55	5	3
		* Nus	eber Res	ized	11	19	2	
All Med	71	57			0	91	0	_
		* Num	ber Res	ized -	0	40	0	

^{*} Note: The Number Resized is the number of subjects in each of the sizes that were assigned a different mask size using the TM Sizing Method.

TABLE 12
US-10 Size Line Analysis

Xethod	1667	6667	Lines M-L				≠ not Tested
TM	90	82	 	19	58	6	
3	90		179 ized -				0
5	87		207 ized -			2	2
6	87		:79 :ed -			5 4	1
7	85		315 ized -			-	4
8	88		338 ized -			-	ō
è	86		334 ized -			-	1
10	90		333 ized -				2
11	85		148 izeč -				0
12	មចំ		140 ized -				4
13	85		134 ized -				2
14	36		153 ized -				3
15	8 5		146 izec -		61 15	4	4
16	36		137 ized -		64 14	3 2	0
5+6	90		486 ized -		54 12	_	3
9+10	88		663 ized -		58 15	6 4	1
11+13	39	98 * Yum	279 ized -		52 11		3

TABLE 12 (CONT)

US-10 Size Line Analysis (Continued)

			Size Lines		Siz	e Di	st	‡ not
yathod	1667	6667	S-M	M-L	S	M	L	Cested
12+1/2(6)	90	88	257	278	24	51	5	4
		* Nur	ber Res	iz∈d -	17	11	4	
14+16	87	84	264	288	15	62	5	1
		* Nu	iber Res	ized -	9	12	2	
All Med	83	80			O	84	C	0
		* nu	iber Res	ized -	0	25	0	

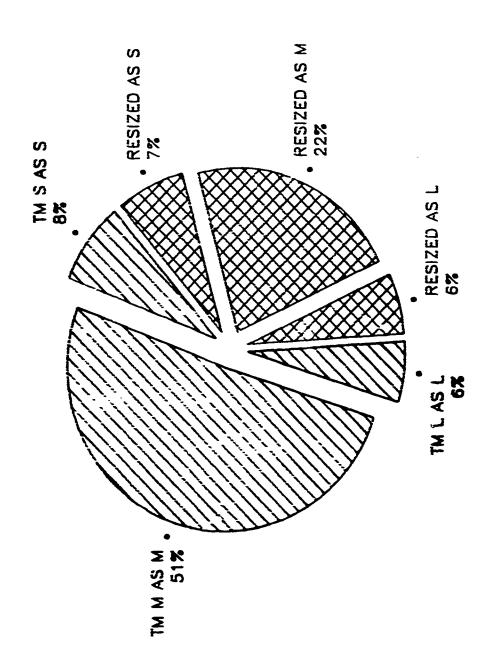
^{*} Note: The Number Resized is the number of subjects in each of the sizes that were assigned a different mask size using the TM Sizing Method.

IM percentages were about the same as all the other methods and surprisingly if all the people are sized in mediums, the same PF percentages are also obtained.

Recognizing that there is no apparent improvement in protective factor, the percentage of the populations which could be incorrectly sized utilizing an anthropometric measurement method was examined. Pie charts for the combination of measurements 11 and 13 for each of the mask types are shown in Figures 20-22. This combination of measurements was the highest recommended by Dr. A. T. Steegmann from the results of the boxplot analysis. If these measurements are used, approximatel, 38 percent of the population would be sized incorrectly. On the average, regardless of the anthropometric method of sizing determination, 35-40 percent of the populations will be sized incorrectly, although the protective factor will be equivalent to the TM method and the actual size distribution will remain on the average undisturbed.

SIZE DETERMINATION SCOTT XM40 SIZE LINE ANALYSIS

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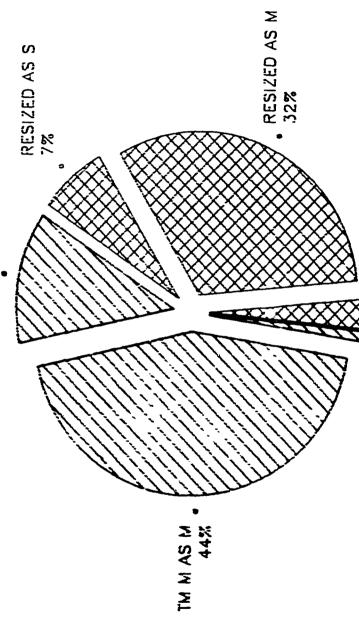


METHOD 11+13

FIGURE 20

SIZE DETERMINATION ILC XM40 SIZE LINE ANALYSIS

TM S AS S 13% RESIZED

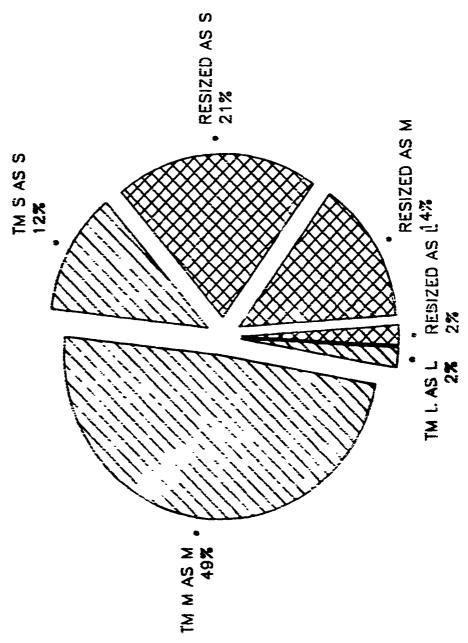


TM L AS L RESIZED AS L

METHOD 11+13

FIGURE 21

US-10 SIZE LINE ANALYSIS SIZE DETERMINATION



METHOD 11+13

TM L AS L

FIGURE 22

6. CONCLUSION AND RECOMMENDATIONS

All of these analysis were consistent and indicated that mask sizing from analysis of facial measurements alone, or even combinations thereof is unlikely to provide a better fitting methodology than the presently used TM method. Regardless of the method of data analysis or sizing technique, results show that the size distribution (tariff) will remain essentially the same, the protective factor will be equivalent to the current TM method and that some portion of the population will be incorrect-This is partially attributable to the difficulty and ly sized. imprecision involved in obtaining facial measurements. The study performed at ILC Dover in which several measurers were evaluated for a number of subjects indicated that precision was poor (in comparison to measurements of firm physical objects) both within and between measurers and that it virtually impossible to accurately measure facial characteris-In addition, development of measurement aids did not result in significantly improved precision. Unfortunately the subtle differences in facial measurements required to differentiate mask sizes does not exceed the degree of human subjectivity.

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The protective factor study performed at CRDEC indicated that the level of protection provided by the mask is essentially independent of the mask size. However, all results indicate that utilizing facial measurements to size the mask will actually degrade the overall operational capability provided by the mask.

The current technical manual method of sizing determination with training does provide the necessary level of differentiation, sizing 90% of the population correctly. The technical manual method combined with a field CNC fit checker (condensation nucleus counter) currently under development, would eventually provide the optimum method to sizing determination. The measurement of facial characteristics may be used in the future with the development of laser scanning devices to record and analyze these measurements, yielding overall an improved, "non-subjective" method of sizing determination.

7. REFERENCES

- 1. FLC Dover/ Scott Aviation XM40/42 Technical Manual- TM3-4240 300.
- 2. Not Used.
- 3. Mandel, J. The Statistical Analysis of Experimental Data. New York: Dover Publications Inc., 1964.
- 4. Rot Used.
- 5. Tukey, J. W., Exploratory Data Azalysis. New York: Addison and Wesely, 1973.

APPENDIX A

Modified M17 Sizing Calipers

(Drawings)

NOT SHOWN DUE TO LARGE SIZE

APPENDIX B

Landmark Sizing Device

(Drawing)

NOT SHOWN DUE TO LARGE SIZE

APPENDIX C

ILC In-House Test

Measurement Procedures

SIZING DETERMINATION

FREEHAND MEASUREMENT

ANTHROPOMETRY PROTCCCL: FREEHAND MEASUREMENTS

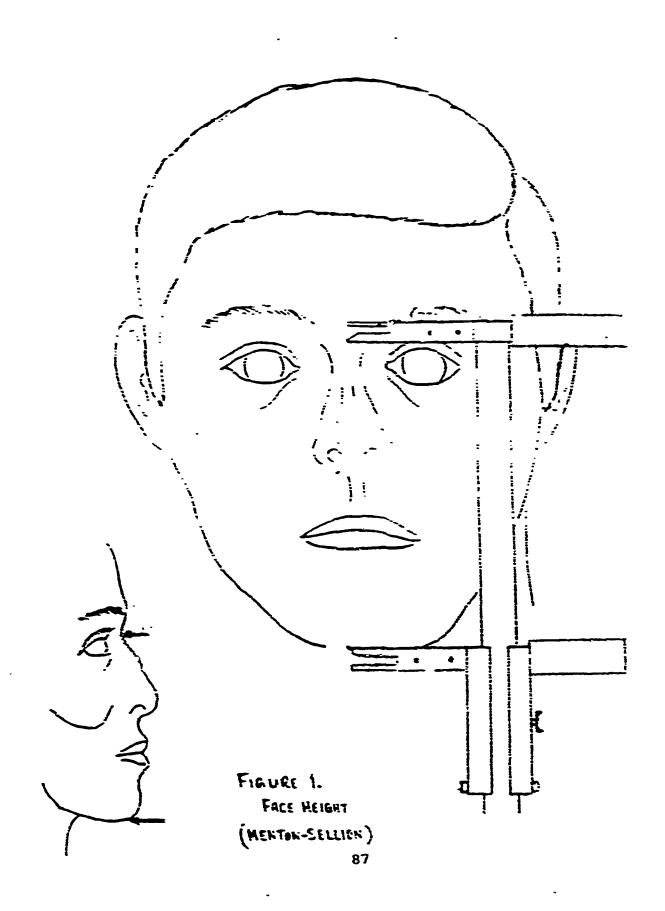
- Face Height (Menton-Sellion Length)
 - A) Seat subject, and tell them to close their jams together.
 - B) Using the sliding anthropometric calipers (blunt ends), center the fixed arm in the deepest point of the nasal saddle, and move the other arm down until it just slides under the center of the chin bone (mark both points before measuring). This works best when measurer's fingertips are at the ends of the caliper arms so she/he can feel for the proper landmarks. Use just enough pressure to firmly dimple the chin, but not so much as to be painful. See Figure 1.
 - C) Read the caliper scale in millimeters. If the top of the moveabel califer arm is three marks past the "ll", record that as "ll3 mm".

 Where the measurement falls half-way between the millimeter marks, record the higher of the two.
- Face Width (Probizygomatic Diameter)

- A) Subject remains seated, jaws together as before.
- B) You are to measure the width across the cheekbones at the approximate point where the edge of the protective mask seal ("the bubble") crosses the cheekbone from top to bottom (prozygion). The point is about 3/6" behind and 3/4" below the outer corner of the eye (ectocanthus). Make a mark here before measuring.

- 6) Hold the spreading caliber so that three fingertips on each hand surround the rounded secsuring tips of the instrument. This allows you at feel for the proper location on the cheekbone, control the calibers, and avoid poling anyone in the ave.
- D) Measure the distance across the checkbenes, applying moderate but not painful pressure. See Figure 2. Note that the dotted lines on the drawing show underlying bone (eye; checkbone). Be sure that the caliper is centered on the face and is at the same vertical point on the checkbone. Diagonal readings induce error. Again, record in millimeters.
- 3. Posterior Jaw Circumference (Bicragion-Submaraibular)
 - A) Subject is seated, jams closed. This measurement takes the pincomference of the lower jaw, ear to ear, just in front of the "Adams Apple".
 - She Refer to Figure 3. Immediately in from, of the ear opening is a small triangular or half-round piece of cartialage. You can must it back and forth with your fingers. The point you are to sea are from (tregion) is at the very top front of this structure, just in front of the ear case). Make a mark here before measuring.
 - C) Use the millimeter tape. Put the "C" point of the tape at the right tragion, holding it firmly in place with your left hand. With your right hand, bring the tape under the lower jaw, just in front of the

jaw/neck junction, and up the other side of the jaw. Bring the tape up to left tragion and read the tape, again in millimeters. The tape should press the skin firmly, but should not be extremely tight.



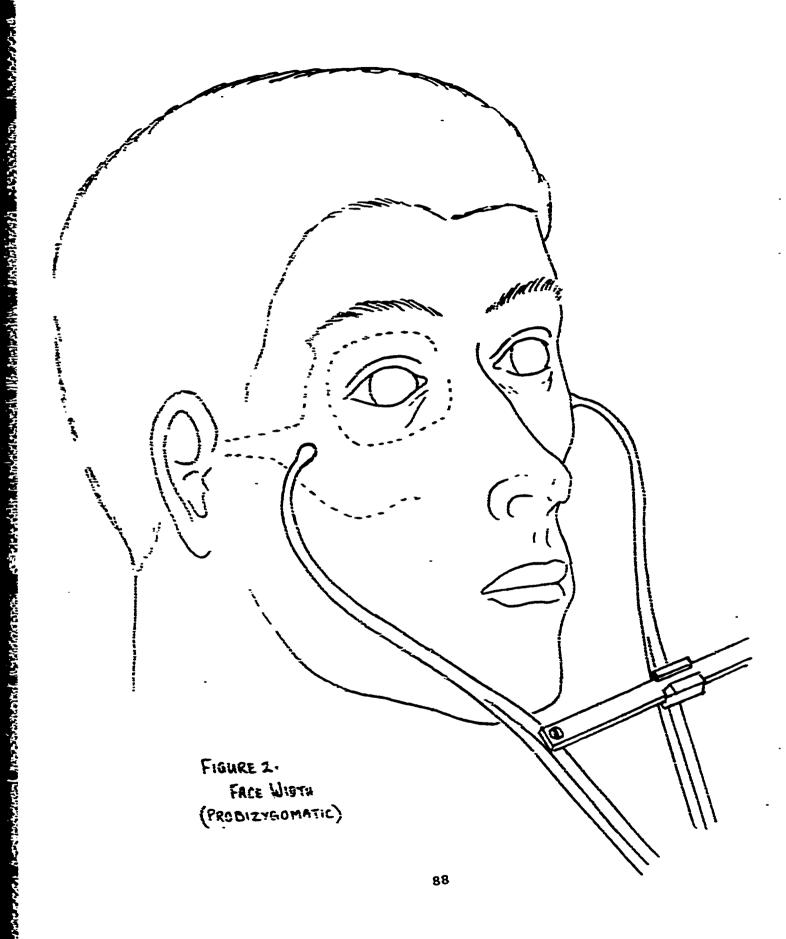




FIGURE 3.

POSTERIOR JAW CIRCUMFERENCE
(BITEAGION SUBMANDIBULAR)

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SIZING DETERMINATION

LANDMARK AGSISTED MEASUREMENT

ANTHROPOMETRY PROTOCOL: LANDMARK INSTRUMENT MEASUREMENTS

Mark the following landmarks, in each case locating the point with the instrument specified, and making dots with a lipliner, or other hypoallergenic cosmetic. Pink Or light red is the best color since it is clearly visible on any shade of skin. Caution: Subject closes eyes during actual measurement. Hold instrument in the hand opposite to the one you write with (for this and following steps).

- A. Sellion: Slide the sellion-finder gently upward along the front of the nose until it comes to a stop at the nasal root (that is, butts up against the brow). Be sure the instrument is centered over the bridge of the nose, and work it gently up and down to be sure no skin is bunched up under it. The place a mark on the skin through the hole. See Figure 4.
- B. Prozygion (right and left): Holding the prozygion finder vertically, very carefully bring the red arrow forward until it rests immediately against the outer corner of the eye fold (ectocanthus). Then make a dot on the skin of the cheekbone through the hole in the finder.

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C. Menton: By visual estimate, locate the center line of the chin. With the subject's chin slightly raised (enough to tighten any sagging skin under the chin - an inch above horizontal), slide the menton finder onto the chin. Be sure the horizontal blade is flush with the skin beneath the chin and the chin is pushed all of the way into the finder. Pressure should be firm and steady enough to keep the chin seated. Mark the skin through the hole centered beneath the chin.

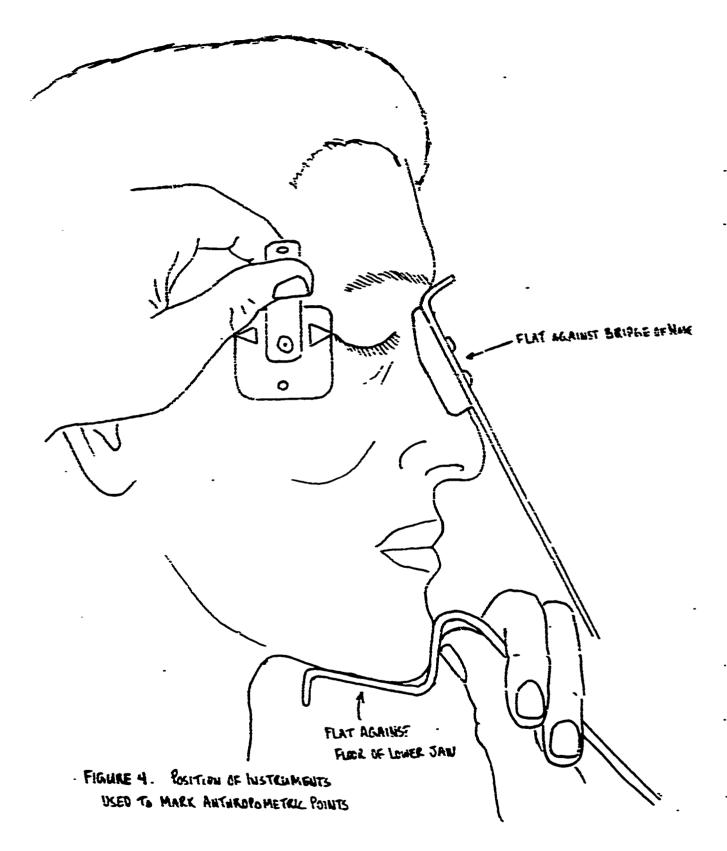
- D. Tragion (right and left): See Figure 5. Immediately in front of the ear opening (external auditory canal) lies a triangular or rounded flap of cartilage called the tragus. It points outward and backward to protect and partly cover the ear opening. The landmark tragion lies just in front of the top of this flap. Mark it carefully, approaching with your marker from the direction of the face.
- 4. Face Height (Menten-Sellion)

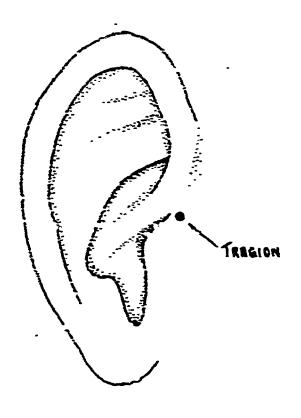
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- A; Subject is seated, teeth together as before, and eyes closed.
- B) Place the fixed top arm of the sliding calipers (blunt end) so that bottom plane of the arm tip centers on the dot between the eyes (sellion). Hold this carefully in place with the fingertips of one hand, and with the other move the moveable are down until it just fits under the middle of the chin. Bring it to rest in the center of the chin dot (Menton). Use just enough pressure to firmly disple the chin, but not enough to cause pain, and be sure your caliper is still on Sellion correctly.
- 5. Face Width (Pro-Bizygomatic Breadth)
 - A) Again, instruct the subject to close his/her eyes.
 - B) Hold the spreading calipers by the measuring tips using three fingers of each hand. Bring the top of one arm fimly into contact with the Prozygion mark on one side of the face. Hold it there with your fingertips.

- C) Then bring the other measing tip into contact with the other prozygion point on the other side of the face. Apply firm but not painful pressure to the measuring tips and read to the nearest millimeter as before.
- 6. Posterior Jaw Circumference (Bitragion Submandibular)
 - A) Subject is seated as before, teeth together and eyes closed. Chin should be slightly raised.
 - B) With fingers of one hand ho's the metric tape so that "O" falls at the tragion point at the right ear.
 - C) With the other hand bring the tape downward and forward so that it crosses the center of the lower jaw at a point just in front of the jaw/neck junction, and bring it up the other side of the trgion.
 - D) Apply moderate pressure to the tape so that it compresses the skin somewhat, but not as hard that it is hard to hold in place. Then read the value to the nearest millimeter where the tape crosses the center of the left tragion dot.





FINURE 5.
RIGHT EAR SYMPLE POSITION OF THE ANTHEOPORETRIC LEADNESS TOPAGION"

APPENDIX D

ILC In-House Past

Raw Data

TABLE E1

Measurer & I FACE MEIGHT - Menton Sellich

	Freehand (Pkase I)	Landmark (Phase II)	Trained Lardmark (Phase III)	Range	ñean 	Variance	Standard Deviation
í	131	131	127	\$	129.57	3.5 à	2.89
2	153	122	121	2	122.00	ð. 5 7	0.32
3	116	:15	113	3	114.67	1.56	1.25
4	112	:15	111	4	112.67	2.39	1.70
5	117	169	108	5	110.33	5.87	2.62
6	136	127	132	3	131.67	13.56	3.68
7	136	129	125	5	128.00	4.67	2.15
3	121	120	115	5	119.00	4.57	2.14
7	114	116	198	8	112.67	11.56	3.40
10	127	130	124	ō	127.60	5.00	2.45
11	117	115	115	4	117.33	2.59	1.70
12	:43	137	135	8	138.33	11.56	3.40
13	148	149	139	?	145.00	18.00	4.24
14	129	123	129	ś	127.00	8.00	2.93
15	125	129	125	4	126.67	2.89	1.79
16	116	126	119	2	115.67	9.37	0.94
:7	138	137	133	5	136.00	4.67	2-15
18	139	135	133	ś	135.67	6.22	2.47
73	133	128	126	7	129.00	8.67	2.94
20	122	120	120	2	120.57	Ç. 57	û.94
21	131 -	128	122	9	127.90	14.99	3.74
22	125	126	119	7	123.33	7.55	5.09
22	125	126	117	7	122.67	14.22	4.03
	134	151	125	9	139.33	19.37	3.30
-3	:12	ili	109	3	110.57	1.Sa	1.25
2š	123	139	124	Ġ	127.33	5.22	2.49
27	135	132	:29	څ	132.69	6.93	2.45
18	127	121	118	ş	122.00	14.60	5.74
29	115	122	115	7	117,57	9.56	3.09
7.0	127	122	124	2	123.00	9-67	0.92

TABLE E2

Measurer # 2 FRCE HEIGHT - Menton Sellion

	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	Hean	Variante	Standard Deviation
į	135	134	130	5	133.00	4.67	2.15
2	117	121	126	4	119.33	2.39	1.70
3	114	110	194	10	109.37	16.89	4.11
4	119	113	124	14	115.67	Jė.22	6.92
5	111	198	114	ć	111.90	6.90	2.45
t	125	131	129	2	127.67	9.27	J.94
7	131	123	126	3	126.67	10.83	3.39
8	121	125	121	4	122.33	3.56	1.87
9	112	114	111	3	112.33	1.56	1.25
19	125	121	131	10	125.67	16.87	4.11
11	116	115	114	2	115.00	9.57	0.82
12	135	133	135	\$	134.67	3.56	1.25
13	136	141	143	7	140.00	8.67	2.94
14	126	125	129	4	126.67	2.89	1.70
15	129	127	:21	3	125.67	11.55	7.49
15	113	118	111	7	114.00	A. 67	2,94
17	134	115	174	17	127.67	39.22	3.96
18	131	129	138	9	132.67	14.39	3.95
15	139	132	125	7	129.02	8.67	2.94
20		117	171	NA.	554	4.00	2. 🤄
- 21	127	12\$	127	3	126.00	2.90	1.4:
22	122	125	121	5	123.99	4.57	2- : 5
-	126	121	174	5	123.67	4.22	2.05
_4	123	130	128	7	127.00	8.67	2.94
25	198	iii	112	4	110.57	3.53	1.59
25	12ė	127	125	2	125.00	0.6/	0.82
27	132	132	131	i	171.67	0.22	9, 23
29	121	125	::9	7	122.09	2.57	2.95
29	120	118	117	3	118.73	1.55	:.23
30	121	124	124	3	123.66	2.00	1.41

TABLE E3

Measurer * 3 FACE MEIG . - Menton Sellion

	Freshand (Phase I)	Landmark (Phase II)	Traited Landmark (Phase III)	Renge	Mean	Variance	Stendard Jeviation
i	129	124	126	5	126.33	4.22	2.05
2	117	115	113	4	113.00	2.57	1.33
Ξ	197	104	:07	3	104.00	2.00	1.41
4	112	104	165	8	107.33	11.56	3.40
5	169	101	:09	1	:00.33	9.22	0.47
ė 7	12=	127	125	4	126,33	2.89	1.70
7	127	120	125	3	121.67	1.56	1.25
5	113	100	115	Ŧ	112.33	š.22	2.47
, 7	108	197	154	=	195.37	2.89	1.75
10	120	124	117	5	:21.60	4.57	2.1a
1:	194	106	113	5	197.67	14.37	3.84
12	123	139	132	Ģ	129.33	14.59	3.85
13	139	135	157	3	137.00	2.67	1.63
14	118	114	1:7	4	:16.33	2.37	1.79
15	119	117	119	2	118.33	0.29	9.54
16	102	113	154	6	111.57	é.59	
17	124	121	129	Š	124 57	12,53	2.32 3.39
16	126	127	127	1	125.67	0.22	9.47
19	122	131	126	ş	126.33	13.36	3.68
29		114	115	AK	NA	9.25	
21	122	120	121	2	121.06	9.23 9.67	9.59 9.82
22	117	113	119	á	117.00	8.69	
	114	116	115	2	115.33	0.89	2.83 0.94
_÷	123	127	123	•	124.33	3.56	
25	100	199	113	13	108.33		1.67
26	118	129	125	5	120.33	37.56	6.13
27	126	128	123	3 7	129.33 129.00	4.72	2.05
28	113	112	119	3		9.57	2.94
29	115	117	114	5	111.27	1.55	1.25
30	1:2	111 111	120		116.00	4.57	2.15
.	***		1-7	**	114.33	10.22	÷.03

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TABLE E4

THE STATE OF THE S

Resource à à FACE HEIGHT - Manton Sellion

	Freshers (Phase 1)	Landaeri :Phase II;	Trained Landestk (Phase III)	Range	Heas	Variance	Standard Deviation
2 .	107	;;;	;37	\$	137.09	Q. 99	0.09
. 3	111	118	115	7	111.57	8.22	2.27
3	117	;10	110	7	112.33	19.39	3.70
4	110	1 0 3	110	7	197.67	10.89	3.30
5	109	iii	107	Ť	169.68	2.57	1.57
ō	127	127	152	5	125.57	5.56	2.36
7	123	123	131	9	125.57	14.22	3.77
- 8	171	:22	112	19	121.57	60.22	7.76
á	169	111	:03	2	109.57	0.29	9.94
10	15i	124	115	15	123.67	37.56	5.13
11	112	109	117	\$	112.67	10.39	3.39
12	134	130	:3!	4	131.67	2.39	1.70
13	145	i40	145	5	143.33	5.56	2.36
14	134	121	125	4	123.33	2.99	1.70
15	121	124	124	3	123.00	2.00	1.41
16	:56	109	113	47	125.00	452.67	21.28
17	135	:19	139	25	125.90	116.67	10.50
15	135	134	133	2	134.96	0.57	9.82
17	125	175	132	7	127.67	7.56	3.09
29	113	113	:23	7	115,33	10.69	3.30
Zi	121	i 18	124	ė	121.69	5.90	2.45
22	126	122	124	4	124.00	2.67	1.63
-	123	114	124	10	129.33	26.22	\$.50
-	129	124	120	÷	124.33	13.56	3.68
25	191	197	116	ą	104.67	14.87	J. 85
25	:29	125	121	3	125.g0	19.57	7.27
27	ilė	135	121	5	154.35	5.56	2.36
28	:29	121	171	i	129.67	0.22	5,47
55	115	រុម្មិ	:15	7	:12-:7	10.37	5.30
29	:5a	115	::6	āi	129.60	354.57	19.10

4.2i

Measurer # 1 POSTERIOR JAW - Bitragion Submandibular Arc

	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	ñean	Variance	Standard Deviation
1	326	326	352	2 5	334.67	150.22	12.26
2	278	289	297	7	281.67	14.87	3.86
3	29 0	288	297	9	291.67	14.89	3.86
4	274	260	306	46	220.00	37¢.67	17.25
5	271	262	284	22	272.33	81.56	9.03
ó	300	303	302	3	301.67	1.56	1.25
7	325	250	331	11	325.33	20.22	4.50
8	280	284	252	4	282.60	2.67	1.63
9	259	260	254	6	257.67	5.69	2.62
10	305	314	322	14	314.67	32.89	5.73
11	265	279	261	9	265.33	13.56	3.68
12	313	325	335	22	324.33	80.39	8.99
13	300	294	305	11	299.67	20.22	4.50
14	272	252	262	10	255.33	22.22	4.71
15	325	317	334	17	325.33	48.22	6.94
15	294	220	295	35	306.33	280.22	16.74
17	322	315	372	17	323.00	48.67	4.98
18	2:3	313	323	19	318.00	16.67	4.98
19	297	292	311	19	300.00	64.67	8.04
20	293	295	305	12	297.67	27.56	5.25
21	306	294	321	27	307.00	122.00	11.05
25	276	298	310	34	294.67	198.22	14.08
	310	295	318	23	307 67	90.89	7.53
-4	329	312	321	9	317.67	15.22	4.93
25	290	297	298	11	271.67	21.56	4.64
25	305	298	315	17	305.00	48.67	6.78
27	212	304	720	16	313.00	44.67	6.68
28	321	312	323	11	318.67	22.89	4.73
29	286	285	703	15	291.33	68.22	8.25
30	290	293	299	Ģ	294.00	14.00	3.74

TABLE E6

Measurer # 2 POSTERIOR JAW - Bitragion Submandibular Arc

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	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	Nean	Variance	Standard Deviation
1	335	332	334	3	333.67	1.56	1.25
2	291	285	290	Ĩ	285.33	15.56	3.68
3	288	330	305	42	307.67	297.55	17.25
4	270	281	308	38	286.33	254.89	15.97
5	253	295	278	7.2	278.67	170.29	13.97
6	282	305	302	23	276.33	104.22	10.21
7	315	320	330	24	324.67	195.87	10.54
S	258	295	308	50	284.00	419.67	29.46
9	232	272	258	40	257.33	323.56	17.99
10	298	328	320	32	318.67	214.22	14.64
11	265	252	276	8	255.67	10.89	3.30
12	316	315	334	19	321.67	76.22	8.73
13	280	208	302	28	275.67	144.87	12.64
14	260	284	298	28	280.67	246.22	15.67
15	310	329	330	20	323.00	84.57	9.20
16	280	295	200	20	291.67	72.22	9. 50
17	305	339	321	34	321.67	192.89	13.59
18	299	331	- 316	41	312.33	286.89	15.94
19	280	306	364	26	296.67	139.56	11.91
- 20		313	290	AR.	AK	196.00	14.00
21	298	315	323	25	312.00	108.67	19.42
22	278	303	291	25	290.67	194.22	10.21
-	284	310	311	27	301.67	154.22	12.50
.4	293	320	315	22	311.00	88.57	9.42
25	288	240	765	17	294.33	57.56	7.59
Zá	300	317	229	20	312.33	77.56	3.61
27	294	321	328	74	314.33	214.39	14.55
23	320	740	534	20	331.33	76.22	3.38
29	292	272	310	32	291.33	240.39	15.52
20	293	704	240	14	295.57	36.22	5.02

TABLE E7

Measurer \$ 3 POSTERIOR JAW - Bitragion Submandibular Arc

	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	gaan	Variance	Standard Deviation
1	346	349	350	10	343.33	22.22	4.71
2	285	290	280	10	285.00	15.67	4.08
3	283	200	390	17	294.33	54.22	9.01
æ	288	295	315	27	299.33	130.69	11.44
5	270	275	275	5	273.33	5.56	2.36
ć	286	295	285	15	256.67	38.89	6.24
7	302	340	325	28	322.33	244.22	15.63
9	280	200	290	20	270.00	66.67	8.16
9	260	260	260	0	260.00	9.09	0.66
10	305	325	320	20	316.57	72.22	8.50
11	269	270	220	50	250.00	466.57	21.60
12	315	330	319	29	318.33	72.22	8.50
13	275	30 5	295	20	291.67	155.56	12.47
14	270	270	275	5	271.67	5.56	2.36
15	320	335	323	15	326.00	42.00	6.48
15	285	∑aû	310	25	295.00	116.67	10.50
17	316	325	325	15	320.00	50.00	7.07
18	315	330	320	15	321.67	38.67	6.24
19	285	305	300	20	295.67	72.22	9.50
20		200	300	XA	NA	0.00	9.00
21	216	319	330	20	316.67	89.89	9.43
22	275	320	295	45	296.67	338.89	18.41
	307	720	339	23	319.00	88.67	9.42
	293	310	310	17	304.33	64.22	9.0i
25	290	298	293	3	291.00	2.60	1.41
28	305	325	315	50	315.00	55.67	6.15
27	Jiá	325	236	14	323. <u>4</u> 7	. 37.56	5.70
23	320	325	33 5	15	326.57	39,97	5. 24
29	285	200	305	20	296.57	72.22	8.50
30	298	700	296	2	299.33	0.89	0.94

TABLE E8

Measurer # 4 POSTERIOR JAW - Bitragion Submandibular Arc

	Freehand (Phase I)	Landeark (Phase II)	Trained Landmark (Phase III)	Range	Mean	Variance	Standard Deviation
1	330	226	329	10	326.67	22.22	4.71
2	265	280	280	15	275.09	50.00	7.67
3	289	319	285	30	291.67	172.22	13.12
4	260	319	310	50	293.33	555.56	23.57
5	260	290	265	20	271.67	172.22	15.12
5	260	300	290	40	283.33	288.89	17.90
7	290	220	315	40	311.67	272.22	15.59
3	265	28 0	275	15	273.33	38.89	6.24
à	230	265	290	6 6	751.57	59 5. 56	24.61
19	310	320	305	15	311.67	38.37	6.24
11	249	269	260	29	253.33	28.39	9.43
12	130	31 0	295	150	245.00	3659.¢0	31.55
13	279	20 0	290	20	286.57	155.56	12.47
14	26 0	280	255	25	265.90	116.57	10.39
15	2 7 0	315	220	20	308.33	172.22	13 12
16	290	300	295	10	295.00	16.67	4.08
;7	350	330	320	30	333.33	155.56	12.47
18	230	325	357	57	327.33	544.22	23.33
19	279	300	293	39	289.33	187.Si	13.79
20	290	310	290	29	296.67	88.27	9.43
. 21	300	315	310	15	308.33	38 .8 9	5.24
22	2 6 0	295	295	35	293.33	272.22	15.50
-	300	310	315	15	308.33	32.37	6.24
	319	320	205	20	310.90	55. <i>5</i> 7	6, 16
25	295	299	285	5	286.67	5.36	2.78
2 5	3:0	310	295	15	305.00	50.93	7.07
27	315	330	320	15	321.67	33.8¢	5.24
28	710	319	739	30	325.67	155.36	12.47
29	269	295	297	37	284.09	288,57	15.79
70	290	305	295	15	295.67	38.99	5.24

TABLE E9

Measurer # 1 FACE WIDTH - Bizygonatic Siameter:

	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	flean	Variance	Standard Deviation
1	137	137	130	7	134.67	10.37	3.30
1 2 3	120	126	120	ś.	122.00	8.Çv	2.83
3	134	125	130	9	127.67	13.56	3.48
4	131	121	126	10	126.06	16.67	4.98
5	120	119	118	2	117.00	9.47	0.82
6	136	126	127	10	129-67	20.22	4.50
7	140	134	131	9	135.00	14.00	3,74
8	120	118	113	7	117.00	8.67	2.94
7	111	114	106	g	110.33	10.87	3.39
10	116	125	125	19	122.33	20.22	4,50
lí	124	121	121	3	122.09	2.00	1.41
12	125	126	124	2	125.60	9.67	9.82
13	115	119	122	7	118.33	6.22	2.97
14	123	121	122	2	122.60	0.67	0.92
15	132	140	137	3	136.33	10.89	3.30
16	127	122	1 i 8	9	122,33	13.56	3.53
17	122	:30	124	9	125.33	11.56	3,49
18	121	124	122	3	122.33	1.56	1.25
19	131	134	174	16	129.47	17.56	4.19
29	118	124	119	5	120.33	4.89	2.52
21	137	129	130	8	132.00	12.47	3.56
22	139	127	121	ę	126.00	14.00	3.74
	:35	133	128	7	132.00	8.67	2.94
_4	131	123	125	8	126.33	:1.56	3.40
25	125	120	574	5	125.00	4.67	2.16
26	122	127	123	5	124.90	4.57	2.16
27	121	128	122	7	123.67	7.56	3.09
28	141	129	131	12	133.67	27.56	5.25
34	121	125	127	Ĝ	124.33	5.22	2.49
39	125	120	121	53	122.00	4.67	2.16

TABLE E10

Heasurer # 2 FACE WIDTH - Bizygomatic Diameter)

	Freehand (Phase I)	Landmart (Shase II)	Trained Landmark (Phase III)	Range	Hean	Variance	Standard Deviation
1	134	137	134	3	135.00	2.00	1.41
2 3	119	129	121	10	123.00	18.67	4.32
3	132	133	112	21	125.67	93.56	9.67
4	130	129	119	11	126.00	24.67	4.97
5	121	126	119	7	122.00	8.57	2.94
6	134	132	129	ć	131.33	5.22	2,49
7	145	139	132	13	138.33	28.22	5.31
6	126	134	122	12	127.33	24.89	4.79
2	122	130	199	21	120.33	74.89	9.45
10	136	138	126	12	133.33	27.55	5.25
11	123	124	122	2	123.00	0.67	0.82
12	143	140	125	19	136.90	52.90	7.87
13	125	141	122	19	129.33	69.56	8.34
14	137	13:	123	11	129.33	21.56	4.54
15	142	138	125	lá	135.33	46.22	5.30
16	124	129	125	5	126.50	4.67	2.16
17	136	139	127	12	134.09	26.00	5.10
18	125	132	122	iO	126.67	16.89	4.11
19	141	140	118	23	133.00	112.67	10.51
20		135	125	AK	AK	25.00	5.00
21	137-	139	135	4	137.00	2.57	1.53
32	131	134	117	17	127.33	54.69	7.41
	138	139	171	3	175.33	10.87	3.30
_4	130	131	126	5	129.00	4.67	2.16
25	124	125	121	5	123.67	4.22	2.05
25	129	141	124	17	131.33	50.89	7.13
27	131	128	123	5	127.33	10.37	5.30
29	135	141	131	10	136.00	16.67	4.98
29	128	124	128	4	126,67	7.56	1.39
39	120	125	124	ż	123.23	6.22	2.49

TABLE E11

Measurer # 3 FACE WIDTH - Bizygomatic Diameter)

	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	Hean	Variance	Standard Deviation
1	135	131	126	9	130.67	13.56	3.68
2 3	126	118	114	12	119.33	24.89	4.79
3	136	115	115	21	122.00	98.00	9.90
4	131	120	113	18	121.33	54.89	7.41
5	126	116	117	4	117.67	2.89	1.70
6	140	120	120	20	126.67	88.87	9.43
7	145	128	128	17	133.67	64.22	8.01
8	12 8	117	120	11	121.67	21.56	4.64
7	125	115	105	20	115.00	56.57	8.16
10	135	125	127	10	125.00	18.67	4.32
11	127	115	110	17	117.33	50.89	7.13
12	141	127	125	16	131.00	50.67	7.12
13	126	120	117	7	121.67	9.56	3.09
14	132	117	125	15	124.67	37.56	6.13
15	147	128	131	17	135.33	69.56	8.34
16	131	120	120	11	123.67	26.89	5.19
17	135	125	111	24	123.67	96.89	9.84
18	130	126	113	17	121.00	48.67	6.9 <u>8</u>
19	139	129	118	21	128.67	73.56	8.58
20		117	115	AK	AK	4.00	2.00
21	139	133	120	19	130.67	62.89	7.93
22	132	126	118	14	125.33	32.99	. 5.73
-	137	125	121	16	128.00	44.67	6.68
•	127	122	125	5	124.67	4.22	2.05
25	133	115	163	25	118.67	110.39	10.53
26	137	123	• 110	27	123.33	121.56	11.03
27	131	128	120	11	125.33	21.56	4.51
28	140	123	115	25	124.00	198.57	10.42
29	127	125	125	2	125.67	0.29	9.94
29	131	115	112	19	119.33	59.56	8.34

TABLE E12

Measurer # 4 FACE WIDTH - Bizygomatic Diameter)

	Freehand (Phase I)	Landmark (Phase II)	Trained Landmark (Phase III)	Range	ilean	Variance	Standard Deviation
1	134	144	135	10	137.67	20.22	4.50
2	132	127	125	7	128.90	8.67	2.94
3	139	137	135	4	137.00	2.67	1.63
4	137	131	127	10	131.67	16.89	4.11
5	134	129	127	7	130.00	9.67	2.94
6	145	138	129	16	137.33	42.89	6.55
7	145	149	131	18	141.67	59.56	7.72
8	136	132	115	21	127.67	92.89	9.10
. 9	126	132	195	27	121.00	134.00	11.58
10	140	141	127	14	136.00	49.67	6.38
11	113	129	126	16	122.67	48.22	6.94
12	144	143	127	17	138.00	69.67	7.79
13	136	136	124	12	132.90	32.00	5.66
14	129	133	123	10	128.33	16.89	4.11
15	147	145	142	5	144.67	4.22	2.95
16	134	126	125	9	128.33	16.22	4.03
17	13 5	140	129	11	134.67	20.22	4.50
18	130	136	124	ó	128.00	8.00	2.93
19	143	140	130	13	137.67	30.89	5.56
20	136	135	129	7	133.33	7.56	3.69
21	145	141	137	9	141.00	10.67	3.27
22	131	135	123	12	129.67	24.89	4.79
•	131	135	134	4	133.33	2.39	1.70
•	175	132	123	12	136.00	26.00	5.10
25	140	135	124	15	133,00	44.67	6. 69
26	140	140	125	15	135.00	50.00	7.07
27	135	137	125	12	132.33	27.56	5.25
28	146	142	133	9	178.33	14.89	3.86
29	137	176	132	5	135.00	4.67	2.10
20	135	153	112	23	126-67	108.22	10.40

APPENDIX E

Anthrapometric Measurement Protocol

ANTHROPOMETRIC MEASUREMENT PROTOCOL

For all as hropometrics; position the subject so that the face is easy to work on. Depending on the heights of technician and subject both usually stand.

MARKING FACIAL LANDMARKS: Under all circumstances, be <u>very careful</u> of the subject's safety when marking and when measuring. In all cases use a hypo-allergenic cosmetic marker. <u>Regiú all procedures with a brief explanation to the subject of what you intend to do.</u>

- A. Ectocanthion [ECT]. With the subject's eyes classed, wark the outer corner of <u>each</u> eye. This is at a point when the eyefold approaches the leading outer edge of the eye socket, and is called ectocanthion. (See Fig. 1 for this and subsequent points).
- B/C. Prozygion [PROZ] and Mid-Temporal Fossa [TEMFF]. View the face from the side and hold the prozygion finder so that the arrow at the forward edge just touches the ectocanthion. Be sure the tool is held vertically when the subject holds his/her head "at attention." (See Fig. 2). Mark test two points on the right side, and repeat on the left side.
- D. Mid-forehead [FH]. By visual estimation, make a mark halfway up the forehead at the center. This point [FH] falls halfway between the top of the eyebrows and the hairline. This is usually about a thumb-breadth above the eyebrow.

- E. Supra-Orbitale, right and left [SOR; SOL]. Having located the mid-forehead point [FH], make a point 2 cm to its left at the same leve; [SOL], and a point 2 cm to its right at the same level [SOR].
- F. Sellion [SEL]. Slide the <u>sellion finder</u> gently upward along the front of the nose until it comes to a stop at the nasal root (that is, butts up against the prow). Be sure the instrument is centered over the bridge of the nose, and work it gently up and down to be sure no skin is bunched up under it.

 (See Fig. 2). Then tip the instrument back so the upper part rests against the forehead. Mark sellion with marker held horizontally.
- G/H. Menton [MEI] and Pogonion [POGO]. By visual estimate, locate the centerline of the chin. Have the subject raise his/her chin 1 inch above its normal position. Slide the menton-finder onto the chin (Fig. 2). Be sure the horizontal blade is flush with the skin of the floor of the jaw, and that the finder is pressed with moderate pressure onto the chin. Mark both points through the holes.
- I. Tragion [TRAS]. The ear canal is partly covered from the front by a small flap of cartilage. Go to the top of this and mark a point just where the base of the cartilage joins the underlying tissue (See Fig. 3). Mark right and left.

1. Height

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- A. Subject removes shoes.
- B. Subject stands with heels together and touching the wall. Cutouts show subject where to place feet.

- C. Buttocks and shoulder blades also touch the wall, but head normally does not touch.
- D. Instruct subject to stand tall and at attention, head horizontally, but not to stretch excessively.
- E. Bring right angle board down until it rests firmly on the head and read height in cm. (resembering to add 10 cm.).

2. Weight

- A. Weight is also taken without shoes, and all subjects should be wearing the same type and amount of clothing if ossible. (Note what clothing is wern if it is not all the same.)
- B. Weigh a sample of clothing items for later correction to nude weight.
- C. Calibrate any scale or balance used against known weight across the range of weights normally encountered (100 to 200 lbs.).
- B. Record weight in the standard fashion to the closest 1/4 lb. or 1/10 kilogram.

3. Adjustable Metric Template Circumference

- A. Set the template at 150 cm.
- B. Subject raises chin 1 inch above normal position, teeth together.
- C. Using the center arrow to be sure the template is centered on the face, press the chin area of the template onto the chin. It should be held up and back against the chin with just enough pressure so that there are no gaps between template and skin. Now have the subject or an assistant hold the template in place while you adjust it to the proper size. The top should run across the center of the forehead.

- D. A good fit is one in which the <u>forward</u> edge of the template is behind the outer corners of the eyes (points ECT), and above the eyebrows (though it may pass over a few hairs at the outer corners of each brow).
- E. The template is at the correct size when its forward or lower edge is resting approximately on the right supraorbital dot [SOR].
- F. Where "D" (eye/eyebrow) and "E" (dot) disagree, adjust template according to "D".
- G. Once template is adjusted, be sure it is flush with facial skin all around and take the reading.

4. Submandibular Skinfold

- A. A skin fold is to be raised beneath the chin on a fore to bac: axis.
- B. At a point just behind menton (N), raise a fold of skin between your thumb and fingertip. It should include only skin and the fat under it.
- C. Bring the jaws of the caliper together on the fold a little way from your fingers and allow them to compress the tissue freely. AFTER THE MEASUREMENT, DO NOT LET THE CALIPER JAWS SNAP TOGETHER.
- D. Take the best of 3 tries, reading to the 0.5 mm. Where measurements are questionable, read to the next highest 0.5 mm.
- 5. Bitemporal Fossa [TEMPF]-Minimum Frontal Arc. [Temporal-Forehead Arc]
 - A. Hold the "O" point of the tape at the subjects right temporal fessa mark [TEMPF]. See Fig. 4 for measurements 5. to 10.

- B. Bring the tape obliquely up and forward across the forehead, being sure to keep it above the brow ridges. The top of the tape should pass through the mid-forehead point [FH].
- C. The tape is then brought down to the subjects left TEMPF mark and read there. Use just enough pressure to get the tape to touch the skin all along its length.

6. Biprozgyomatic-Menton Arc. [Cheekbone-Chin Arc]

- A. Tell subject to close his/her teeth together.
- B. Hold the "O" point of the tape at subject's right prozygion point [PROZ] with your left index finger. See Fig.4.
- C. Bring the tape down around the chin so that the <u>top</u> of the tape passes just across menton [MEN]. Hold it in place with your left thumb.
- D. The tape is then brought up the other side of the face until it reaches the subject's left PROZ point.
- E. Put on just enough pressure so the tape is flat on the skin (no gaps), but do not compress or dimple the skin. Check the tape to be sure it touches all three points, and record.

7. Bitragion-Minimum Frontal Arc (Freehand). [Ear-Forehead Arc]

- A. Remind subject that the teeth are to be together.
- B. Hold the "O" point of the tape at the subject's right tragion [TRAG].
- C. Bring the tape obliquely up across the forehead so that the top of the tape passes just below the FH point.

- D. Then bring it down across the left temple to the left TRAG and again adjust it to all points, keeping the tape just flat to the skin without compression.
- 8. Bitragion-Pogonion Arc (Freehand). [Ear-Chin Arc]
 - A. Remind subject that the teeth are to be together.
 - B. Hold the "O" point of the tape at the subject's right tragien [TRAS].
 - C. Bring the tape down around the chin so that the <u>top</u> of the tape passes just below pogonion point [POGO].
 - D. The tape is then brought up the other side of the face until it reaches the subject's left tragion point [TRAG].
 - E. Put just enough pressure on the skin without compressing it. Check the tape to be sure it passes all three points correctly.
- 9. Bitragion-Minimum Frontal Arc (Tape Holder). [Ear-Forehead Arc, Holder]
 - A. Place the tape holder in the ears, keeping the two arms of the instrument to the rear of the head.
 - B. Repeat measurement "7." above, but take your measurement where the tape crosses the outer edge of the steel washer. The top of the tape is even with the top arm of the holder.
- 10. Bitragion-Pogonion Arc (Tape Holder). [Ear-Chin Arc, Holder]
 - A. With the tape 'older still in place, repeat measurement "8." above.
 - B. Remove the tape holder and clean the ear plugs with an ethanol sponge.

11. Bizygomatic Diameter (Calipers). [Face Width]

- A. Hold the spreading calipers near the measuring "olives" with your fingertips. Feel for the bone with your fingers.
- B. Measure the maximum horizontal breadth of the face across the zygomatic arches. See Fig. 5 for measurements 11 to 16.
- C. This is usually about where the sideburn crosses the arch, about one inch in front of the ear.
- D. Use firm but not painful pressure. The caliper is stopped by bone on both sides.

12. Biprozygomatic Diameter (Calipers). [Cheekbone Width]

- A. This measurement is similar to "11", but is a little more forward.
- B. In the same way as before, measure the maximum diameter across the cheekbene, placing your caliper "olives" over both PROZ points (Fig. 1).

13. Menton-Sellion Diameter (Calipers). [Face Height]

- A. Tell the subject to place his/her teeth together.
- B. With the finger tips of one hand on the fixed caliper tip, place the top of the SEL landmark (high on the bridge of the nose), and hold it in place.
- C. With the other finger tips hold the moveable branch of the calipers by the tip and bring it down until it touches point MEN at the bottom of the mid-chin area.
- D. Take the measurement with moderate but not painful pressure so the caliper is stopped by the chin bone (revised).

- 14. Bizygometic Diameter (Gauge). [Face Width, Gauge]
 - A. Repeat measurement "11" exactly in all details.
 - B. However, the gauge will have to be held against a metric scale to determine the actual measurement.
- 15. Biprozygomatic Diameter (Gauge). [Cheekbone Width, Gauge]
 - A. Repeat measurement "12" as above.
- 16. Menton-Sellion Diameter (Gauge). [Face Height, Gauge]
 - A. Repeat measurement "13" as above.
 - B. In the case, be especially careful to take the dimension off the qauge at the same point.

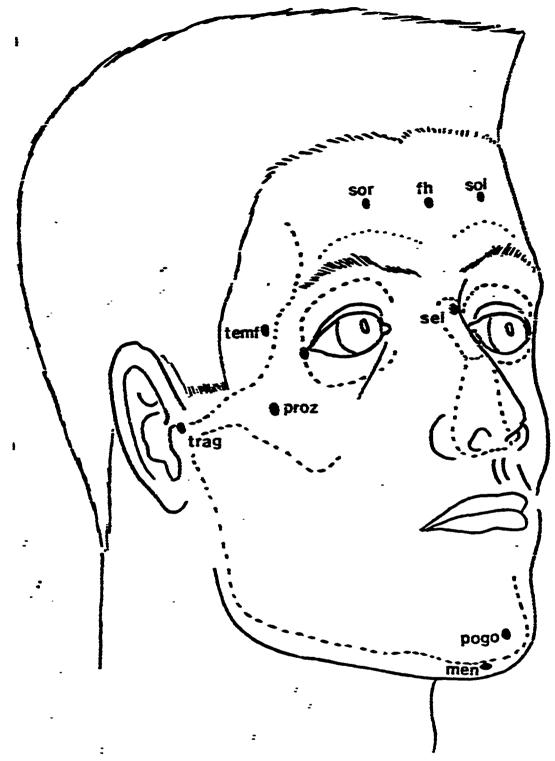
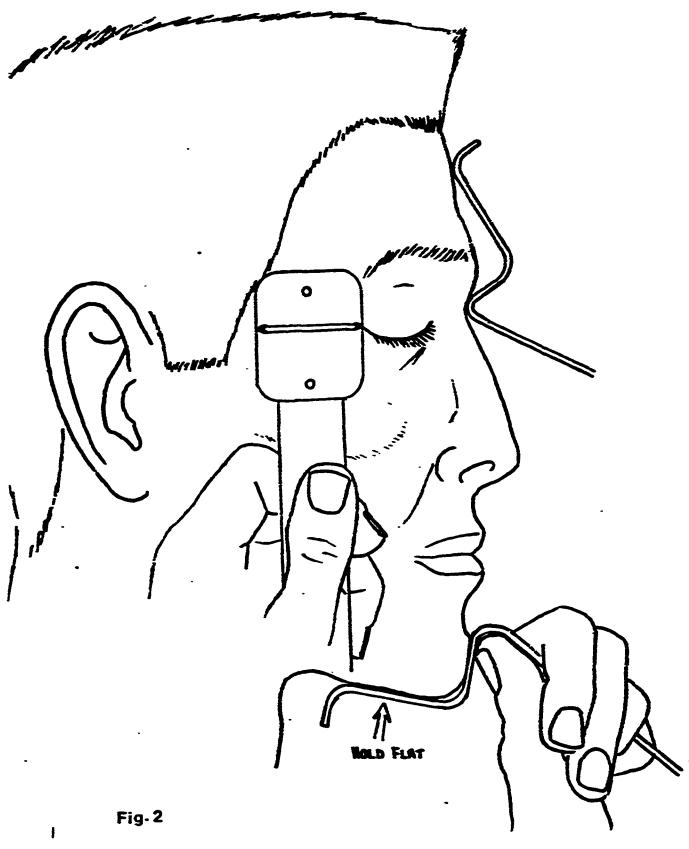


Fig. 1



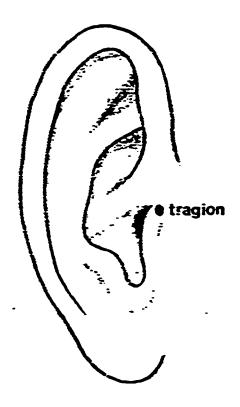
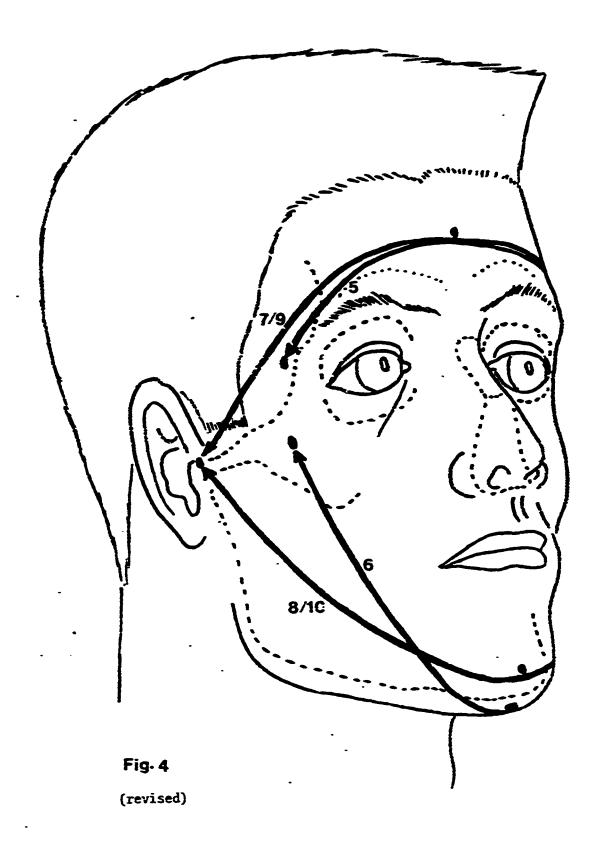
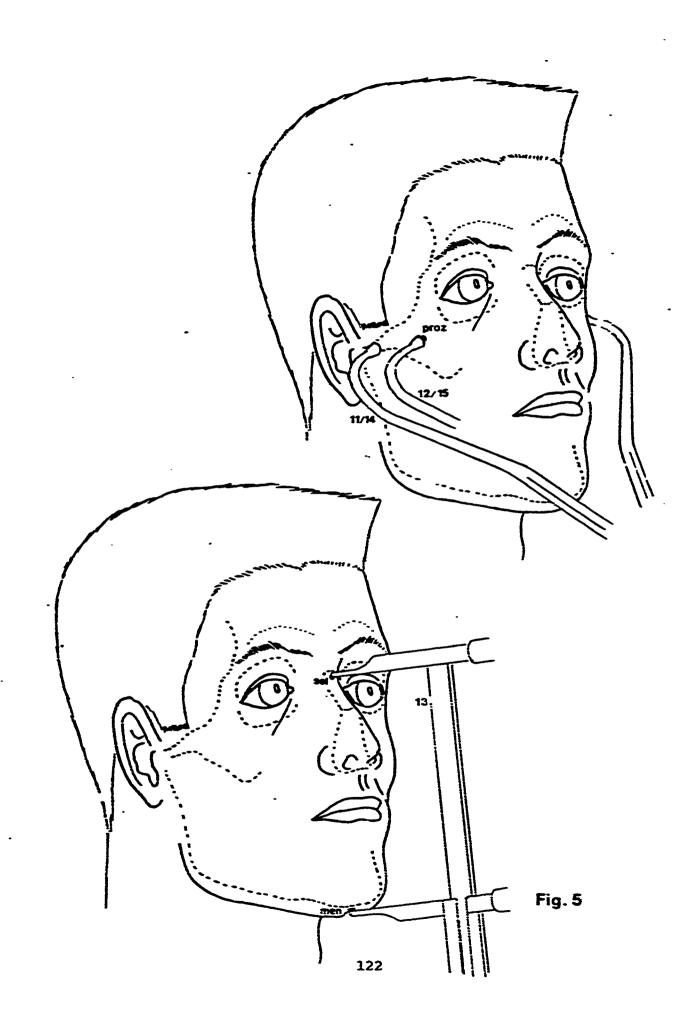


Fig. 3





APPENDIX F
CRDEC Raw Test Data

APPENDIX 61

US-10 Protection Factor Data and Summary

US-10

SUBJECT \$ Mask ID \$			US-10 MEDIUM M-2-SI QAF	US-10 LARGE
		20000	2180	0
SUBJECT #		SMALL	US-18 MEDIUM TM M-1-BE	US-10 LARGE
		19600	18700	0
SUBJECT #		SMALL	US-10 MEDIUM M-2-BE	US-10 LARGE
		11100	2000J	6
		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		0	TM M-1-CR 396	L-1-SI 20600
SUBJECT #			US-10 MEDIUM M-1-SI QAF	US-10 LARGE
		3240	148	0
SUBJECT #	6		US-10 MEDIUM	UŠ-10 LARGE
Mask ID #		0	M-2-SI QAF	
SUBJECT #	-	US-19	2540 US-10	20000 US-10
Mask ID #		SMALL TM S-1-BE	MEDIUM M-4-AU	LARGE
		2770	20000	8
SUBJECT #	8	US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #			M-3-BE	TM L-1-S!
		9	19800	1780

SUBJECT #	9		US-10 MEDIUM	US-10 LARGE
Mask ID #		_	TM M-2-BE	L-1-SI
		0		7340
-		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #			M-3-8E	
		20900	20000	0
SUBJECT #	11		US-10	US-10
W- 1 10 E			MEDIUM	LARGE
Mask ID #		5-2	TM M-4-AU	
		12500	2248	Û
SUBJECT #	12		US-10	US-10
Mask ID #			MEDIUM M-2-BE	LARGE TM L-1-BE
HOSK ID 4				
		0	20000	1670
SUBJECT #	13			US-10
M 15 *				LARGE
Mask ID #			TM M-1-BF	L-1-8E
		0	20000	20000
SUBJECT #	14		US-10	US-10
M1 10 4		SMALL S-1-CR	MEDIUM M-3-BE DAF	LAPGE
Mask ID #			11-3-62 UHF	
		20000	4920	0
SUBJECT #	15		US-10	US-10
M1 10 4		SMALL	MEDIUM	LARGE
Mask ID #		S-1-8E	M-1-Si OAF	
		20000	644	0
SUBJECT #	16		US-10	US-10
.		SMALL	MEDIUM	LARGE
Mask ID #			TM M-1-CR	L-2
		0	13100	20000

		US-10 SMALL		US-10 LARGE
Mask ID #		S-1-CR	M-2-SI QAF	
		2510	358	0
SUBJECT #	18	US-10	US-10 MEDIUM	US-10 LARGE
Mask ID #		SMALL	·	L-2
		0	20000	20000
SUBJECT #	19	US-10	US-10	US-10
		SMALL		LARGE
Mask ID #				L-1-8E
		0	20000	687
SUBJECT #	20	US-10	US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID #			M-1-BE	TM L-1-BE
		0	20000	20000
SUBJECT #	21	US-10	US-10	US-10
36802C. ¥		SMALL	MEDIUM	LARGE
.1ask ID \$			M-2-SI QAF	TH L-2
		0	2000	20ΰ00
SUBJECT #	22	US-10	US-19	US-10
		SMALL		LARGE
Mask ID #			M-3-BE GAF	
		• •	250	0
SUBJECT #	23	US-10	US-10	US-19
		SAPLL	MEDIUM	LARGE
Mask ID #		S-2	TM M-1-8E	
		29000	20600	0
SUBJECT #	24	US-10	US-10	US-10
		SMALL	MED ! UM	LARGE
Mask ID #		Thi S-1-CR	11-3-8E CAF	
		20000	1160	9

SUBJECT # Mask ID #		SMALL S-1-BE	US-10 MEDIUM TM M-1-CR	US-10 LARGE
			9010	0
•		SMALL	US-10 MEDIUM M-2-S1 QAF	US-10 LARGE
			303	0
SUBJECT #		SMALL	US-10 MED!UM M-3-BE QAF	US-10 LARGE L-1
		9	102	20000
SUBJECT #		SMALL	US-10 MEDIUM M-2-BE QAF	US-10 LARGE
1005 10 4			149	
		SMALL	US-10 MEDIUM M-1-CF QAF	US-10 LARGE
		20000	332	0
SUBJECT #		SMALL	US-10 MEDIUM M-1-SI QAF	US-10 LARGE
		20000	5950	0
SUBJECT # Mask ID #	31	US-10 SMALL S-2	US-10 MEDIUM M-2-Si QAF	US-10 LARGE
		20000	460	0
SUBJECT #		US-10 SMALL TM S-1-BE	US-10 MEDIUM M-1-SI	US-10 LARGE
1103K IV 4		2030	20000	0

SUBJECT #	33	SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #			M-1-SI	
		20000	18400	0
SUBJECT #		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #			M-3-BE QAF	
		20000	100	0
SUBJECT #	35		US-10 MEDIUM	US-10 LARGE
Mask ID #		TM S-4	M-2-BE	
		16700	20000	0
SUBJECT #	36		US-10 MEDIUM	US-10 LARGE
Mask ID #		TM S-1	M-4-AU	
		20000	264	0
SUBJECT #	37	US-10	US-10	US-10
M 10 E			MEDIUM	LARGE
Mask ID #		TM S-2	M-2-BE	
		20000	17700	0
SUBJECT #	38		US-10	US-10
Mask ID #		SMALL TM S-1-BE	MEDIUM M-8	LARGE
1.00% 10 4				
		20000	20900	0
SUBJECT \$	39		US-10	US-10
Mask ID #		SMALL	MEDIUM M-2-BE QAF	LARGE TM L-1-BE
		0	156	15600
SUBJECT #	48	US-10	US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID #		S-1-CR	TM M-4-AU	
		1380	899	0

		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		TM S-1-BE		
		1170	615	0
SUBJECT #		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		S-1-8E	M-3-BE OAF	
		20000	1100	0
SUBJECT #	43		US-10	US-10
Mask ID ‡			MEDIUM M-2-SE QAF	LARGE L-1-51
-				
		0	959	20000
SUBJECT #	44		US-10	US-10
M1 ID 5				LARGE
Mask ID #			M-1-SE QAF	L-2
		0	4410	17300
SUBJECT #	45	US-10	US-19	US-10
Mask ID #			MEDIUM M-2-BE QAF	LARGE
Hask ID 4			11-2-05 MML	
		2190	5690	0
SUBJECT #	46	US-10	US-10	US-10
M1 15 4			MEDIUM	LAPSE
Mask ID #		S-1-CP	M-4-AU QAF	
		20000	3330	Ð
SUBJECT #	47		US-10	US-10
Mask ID #		SMALL Th S-2	MEDIUM M-1-BE	LARGE
1195 (10 4				
		20000	20000	0
SUBJECT #	48	US-10	US-10	US-10
Mask ID #		SMALL S-2	MEDIUM TH M-2	LARGE
HOSK ID 4		J-2		
		14200	7650	0

SUBJECT #		US-10 SMALL S-1	US-10 MEDIUM TM M-5	US-10 LARGE
		18800	20000	0
SUBJECT # Mask ID #		US-10 SMALL	US-10 MEDIUM TM M-8	US-10 LARGE L-1-BE
				20000
		US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #				L-1-51
		•	455	19900
SUBJECT #	52		US-10 MEDIUM	US-10 LARGE
Mask ID ‡				
		Ð	Ũ	0
SUBJECT #	53	US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Masi ID #		S-1-S1 	TM M-1-8E	
		199	20000	Ũ
STBRECT #	54	u9-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		S-2	Tm m-2	
			1310	0
SUBJECT #	55	US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		S-4 CAF	Tm m-7	
		6720	20000	0
SUBJECT #	56	US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID ‡		S-1-CR	TM M-3	
		20000	519	ů.

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		US-10 SMALL	US-18 MEDIUM	US-10 LARGE
Mask ID 4	•		TM M-2	L-1-BE
		0	20000	19300
		SMALL	MEDIUM	US-10 LARGE
Mask ID 1	;		TM M-1-8E	L-1-SI
		0	20000	7460
SUBJECT 4	59	US-10	US-10	US-10
	•		MEDIUM	LARGE
Mask ID 4	‡	S-1-SI	TM M-2-BE	
		29000	100	0
SUBJECT 4	60		US-10	U5-10
			MEDIUM	LARGE
Mask ID 4	‡	5-2	Tm M-5	
		20000	3120	0
SUBJECT 4	61	US-10	US-10	US-10
			MEDIUM	LARGE
Mask ID 4	!		TM M-7	L-2
	-			
		0	15600	19700
SUBJECT 4	62	US-10	US-10	US-10
		SMALL	MEDIUM	LAPGE
Mask ID 4	!	Th S-1-BE	m-1-8E	
		20000	20000	0
SUBJECT 4	63	US-10	US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID 4	‡	S-4 QAF	TM M-8	
		2810	326	0
SUBJECT 4	64	US-10	US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID 4	‡	TM S-1	M-7	
		1200	18100	0

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SUBJECT # 65		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		S-1-CR	TM M-7	
		20000	20000	9
SUBJECT # 66		US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		S-2	TM M-8	
		20000	20000	0
SUBJECT #	67	US-10	US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID #			TM M-5	L-1-SI
		0	20000	8600
SUBJECT #	68		US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID #			M-2	TM L-1-SI
		0	20000	17700
SUBJECT #	69	US-10	US-10	US-10
•		SMALL	MEDIUM	LARGE
Mask ID #		5-1	TM H-3	
		14500	20000	0
SUBJECT #	78	บ5-10	US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID #		S-4 0AF	TM M-2	
		3050	4390	 G
SUBJECT #	71		US-10	US-10
		SMALL	MEDIUM	LARGE
Mask ID ‡			TM M-1-BE	L-1-8E
		0	20000	5940
SUBJECT #	72	บร-10	US-10	US-10
•		SMALL	MEDIUM	LARGE
Mask ID #		S-1-SI	TM M-2-BE	
		20000	20000	0

		US-10 SMALL	US-10 MEDIUM	US-10 LARGE	
		TM 5-2	M-8		
		14700	1270	0	
SUBJECT #		SMALL		US-10 LARGE	
Mask ID #			TM M-2-8E	L-1-SI 	
		0	19000	143	
SUBJECT #	<i>7</i> 5		US-10	U5-18	
Mask ID #		SMALL TM S-1-SI	MEDIUM M-1-BE	LARGE	
Hask ID #		111 2-1-21	11-1-05		
		17900	17100	0	
SUBJECT #	76		US-10	US-10	
Mask ID #			MEDIUM TM M-2	LARGE	
HOSK ID 4			111 11-2		
		18700	20000	0	
SUBJECT #	77		US-10	US-10	
Mask ID #		SITALL	MEDIUM TH M-3	LARGE L-2	
HESK ID 4					
		0	20000	20000	
SUBJECT #	78		US-16	US-18	
Mask ID #		SMALL	MEDIUM TM M-5	LARGE L-1-BE	
HISSK ID #					
		0	20000	1970	
SUBJECT #	79	== ==	US-10	US-10	
Mask ID #		SMALL S-2-SI	MEDIUM TM M-2	LARGE	
1105K 10 4		5-2-5!			
		4530	20000	0	
SUBJECT #	80	US-10	US-10	US-10	
Mari IO S		SMALL	MEDIUM	LARGE	
Mask ID #		*	TM M-1-8E	L-1-BE	
		0	20000	742	

SUBJECT #			US-10 MEDIUM TM M-3 SAF	US-10 LARGE
ussk In #			III N-2 PAT	L-1-SI
		C	111	29900
		SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #			TM M-7	
		20000	18700	0
SUBJECT #	83	US-10 SMALL	US-10 MEDIUM	US-10 LARGE
Mask ID #		S-7	TM M-8 QAF	
		20000	476	0
SUBJECT #	84	119_10	US-10	US-10
332023. 4		SMALL	MEDIUM	LARGE
Mask ID #			TM M-5	
		20000	6700	0
SUBJECT #	85	US-10	US-10	US-10
		_	MEDIUM	LARGE
∏ask ID ‡		TM S-2-SI	M-5	
		620	183	0
SUBJECT #	86	US-10	US-10	US-10
Maat. ID 4		SMALL S-1-BE	MEDIUM TM M-2-BE	LARGE
Mask ID #		2-1-00	111 H-2-0E	
		20000	20000	0
SUBJECT #	87		US-10	US-10
Mask ID \$		SMALL TM S-2	MEDIUM M-5	LARGE
Hesk ID +		111 3-2		
		20000	20000	8
SUBJECT #	88	US-10	US-10	US-10
Maet ID 4		SMALL TM S-1-CR	MEDIUM M-7	LARGE
Mask ID \$		111 9-1-64	11-/	
		20000	20000	0

SUBJECT #	89	SMALL	US-10 MEDIUM	US-10 LARGE	
Mask ID #			M-2-BE	TM L-1-SI	
		0	1210	11600	
SUBJECT #	90	SMALL	US-10 MEDIUM	US-10 LARGE	
Mask ID #		S-1-8E	TM M-2		
		17400	20000	0	
SUBJECT #	91		US-10	US-10	
Mask ID #		SMALL TM S-1-SI	MEDIUM	LARGE	
		20000	20000	0	
SUBJECT #	92	US-10	US-10	US-10	
		SMALL	MEDIUM	LARGE	
Mask ID #		5-1	TM M-2		
		20000	20000	0	
SUBJECT #	93		US-10	US-10	
			MEDIUM	LARGE	
dask ID ‡			TM M-8	L-1-BE	
		0	14900	20000	
SUBJECT #	94	US-10	US-10	US-10	
w		SMALL	MEDIUM	LARGE	
Mask ID #		5-2	TM M-2-8E		
		20000	2550	0	
SUBJECT #	95		US-10	US-10	
Mask ID #		SMALL S-1-CR	MEDIUM TM M-8	LARGE	
Hask ID +		2-1-CK			
		20000	20001	0	
SUBJECT #	96		US-10	US-10	
Maele In a		SMALL	MEDIUM	LARGE	
Mask ID #		5-2	111 M-3		
		20000	19200	G	

SUBJECT \$		US-10 SMALL TM S-1-SI	US-10 MEDIUM M-2	US-10 LARGE
		20000	20000	0
SUBJECT #		US-10 SMALL TM S-2	US-10 MEDIUM M-8	US-10 LARGE
			198	0
SUBJECT #	99		US-10 MEDIUM	US-10 LARGE
Mask ID ‡			TM M-2-BE	L-2
		ງ	20000	1180
SUBJECT #	190		US-10 MEDIUM	US-10 LARGE
Mask ID #			M-2-BE	
		20000	436	0
SUBJECT #	101		US-10	US-10
Mask ID #		SMALL	MEDIUM TM M-2	LARGE L-1-SI
1.03% 12 4				
		0	20000	1460
SUBJECT #	192	US-10	US-10	US-10
Mark ID &			MEDIUM	LARGE
Mask ID #		TM S-1	M-7	
		20909	8330	0
SUBJECT #	163		US-10	US-10
Mask ID \$		SMALL	MEDIUM TH M-7	LARGE L-1-SI
•				
		0	8090	19000
SUBJECT #	104	US-10	US-10	US-10
Mask ID #		51911 5-1	MEDIUM	LARGE
1465K 1U #		D-1	Tm m-8	
		20000	20000	0

SUBJECT #				US-10 LARGE
Mask ID #		- - ·	TM M-1-BE	
		16900	20000	0
SUBJECT #	106	SMALL	US-10 MED:LUM	US-10 LARGE
Mask ID #			TH M-5	
			19400	0
SUBJECT #	107		US-10	US-10
Mask ID #			MEDIUM TM M-3	LARGE
nask ID #		S-1-BE		
		20000	16500	6
SUBJECT #	198		US-10	US-10
Mask ID #			MEDIUM TH M-2	LARGE
1105K 10 4				
		20000	20000	0
SUBJECT #	109	US-10	US-10	US-10
			MEDIUM	LARGE
1ask ID ≇			7M M-2	
		30000	20000	0
SUBJECT \$	110	US-10		US-10
Ma-1 ID #			MEDIUM TM M-3	LARGE L-1-BE
Mask ID #			101 11-2	
		0	10900	766
SIBJECT #	111	US-10	US-10	US-18
W1 15 8		SHALL	MEDIUM	LARGE
Mask ID #			TM M-1-8E	L-2
		0	20000	20000
SUBJECT #	112	US-10	US-10	US-10
W1 10 -		SMALL	MEDIUM	LARGE
Mask ID #			Tri M-2	L-1
		0	13600	793

SUBJECT # Mask ID #	113	US-10 SMALL	US-10 MEDIUM M-5	US-10 LARSE TM L-1-SI
		0	7490	20000
SUBJECT # Mask ID #	114	US-10 SMALL	US-10 MEDIUM	US-10 LARGE
IIdSK IU Ş		0	TM M-8 20000	L-1-SI 2540

US-10 SIZE DETERMINATION DATA

Su	bject #	Pf	Photo	Best Fit	Comments
	1		~~~~~~	GAF	
+	2	S-M	н	н	
+	3	s-n	S-M	S-H	
+	4	L	M-L	L	H PF LOW
	5			QAF	
	6			QAF	
+	7	H	s-n	н	S PF LOW
+	8	h	M-L	н	L PF LOW
+	•	M-L	н	н	L NOSE CUP HIGH
+	10	S-H	S-M	н	
+	11	S	S-M	S	H PF LOW
+	12	H	M-L	н	L PF LOW
+	13	M-L	M-L	Ħ	
	14			GAF	
	15			QAF	
+	16	H-L	M-L	L	
	1?	****		GAF	
+	18	M-L	M-L	H	
+	19	Ħ	M-L	H	H PF LOW
+	20	H-L	M-L	L	
	21			QAF	
	22	*****		QAF	
+	23	s-m	S-M	H	
	24	*****		QAF	

Su	bject #	Pf	Photo	Best F	it	Comments
+	25 (70)	S-M	н	H		
	26			QAF		
	27 (61)			QAF		
	28 (72)			QAF		
	29 (65)			QAF		
	30 (63)			QAF		
	31			QAF		
+	32	H	5-M	H		S PF SLIGHTLY LOW
+	33 (62)	s-M	s-n	H		
	34			QAF		
+	35	S-M	S-M	H		
+	36	S	S	S		
+	37 (66)	S-M	s-X	H		
+	38	S-M	S-M	Ħ		
	39 (68)			QAF		
+	40	s	s-n	5		PF LOW ON BOTH
	41 (64)			QAF		
	42 (59)			QAF		
	43			QAF		
	44 (67)			QAF		
	45			QAF		
	46 (69)			QAF		
+	47	5-M	S-M	H		
+	48	S-M	M	Ħ		
+	49	S-M	Ħ	45		
+	50	M-L	H	H 181		
				141		

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	<u>net ser den in die bedaal dat da</u>			or one or one or other property.	
ir C Sul	bject #	Pf	Photo Bo	est Fit	Comments
+	51	L	M-L	L	H PF LOW
	52	NO TEST			
+	53	н	н	н	
	54	S	S-M	S	H PF LOW
•	55	S-M	S-M	Ħ	
	54	S	S-H	S	H PF LOW
	57	M-L	M-L	Ħ	
+	58	M-L	H-L	H	
	59 (42)	S	S-M	S	H PF LOW
•	60	S	S-M	S	M PF SLIGHTLY LOW
. •	61 (27)	M-L	M-L	M-L	
**************************************	£2 (33)	S-M	S-M	Ħ	
•	43 (30)	s	S-M	s	M PF LOW
•	64 (41)	H	3-M	H	S FF LOW
- +	65 (29)	S-M	S-M	S-M	
	66 (37)	S-M	S-M	н	
+	67 (44)	M-L	M-L	н	
*	68 (39)	M-L	H-L	м	
₹ ₹ - + \$	69 (46)	S-M	S-M	M	
} 3	70 (70)			QAF	
+	71	н	н	H	L PF SLIGHTLY LOW
+	72 (28)	S-M	S-M	H	
+	73	s	S	S	M PF LOW
	74	H	H	H	L PF LOW
	75	s-M	s-m	S-M	
* * * * * * * * * * * * * * * * * * *	76	S-M	H	н 142	

and the second of the second s

Sui	bject #	Pf	Photo	Best Fit	Comments
+	77	M-L	M-L	н	
+	78	н	M-L	н	L PF LOW
+	79	M	s-M	S	S PF SLIGHTLY SOW
+	80	H	M-L	н	L PF LOW
*	81	£	M-L	L	M PF LOW
+	82	S-M	н	Ħ	S NCSE CUP LOW
X	83	s	S-M	s	M PF LOW
	84 (56)	S-M	s-M	н	
+	85		s	5	PF LOW ON BOTH
+	36	S-M	м	н	
•	87 (102)	S-M	s-M	н	
+	8.8	S-M	S-M	н	
•	89	L	L	L	
+	90	s-m	м	н	
+	71	s-n	s-M	н	
+	92	S-M	М	н	
+	93	H-L	M-L	н	
+	94	s	S-M	s	H PF SLIGHTLY LOW
+	95	s-m	S-M	н	
+	96	s-n	н	н	
+	97	S-M	s-M	м	
+	78	s	S-M	s	M PF LOW
+	99	н	M-L	н	L PF LOW
	100 (36)	s	s-M	s	M PF LOW
+	101	н	н	н	L PF LOW
	102 (87)	S-M	s-n	н 143	

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Su	bject #	Pf	Photo	Best Fit	Comments
•	103	M-L	M-L	н	
+	104	S-M	н	н	
	105	S-M	н	н	
+	106	H	Ħ	н	S PF LCW
+	107	S-H	S-M	н	
•	T08	S-H	S-M	S	
+	109	S-M	S-M	н	
+	110	н	n	M	& PF LOW
+	111	M-L	M-ī	I.	
+	112	n	H	K	•
+	113	M-L	H-L	L	
+	114	н	M-L	н	L FF SLIGHTLY LOW

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APPENDIX 62

Scott XM4G Protection Factor Data and Summary

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Scott-XM40

•		SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM48 LARGE
Mask ID #		S-5-Y	TM M-1	
			156	0
SUBJECT #	2		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-5-W	TM M-6	
		20000	20000	0
SUBJECT #	3	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-3	Tm m-7	
		311	20000	9
SUBJECT #	4	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-5	M-12	
		20000	20000	0
SUBJECT #	5	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Bask ID #				
-GCK 15 4		TM S-3	M-1	
200 ID 4		Th S-3 20000	n-1 14500	
	6	20000 SCOTT-XM40 SMALL	14500 SCOTT-XM40	0 SCOTT-XM40
SUBJECT #	6	20000 SCOTT-XM40 SMALL	14500 SCOTT-XM40 MEDIUM	O SCOTT-XM40 LARGE L-1-S!
SUBJECT # Mask ID #	6	20000 SCOTT-XM40 SMALL	14500 SCOTT-XM40 MEDIUM TM M-5-Y	SCOTT-XM40 LARGE L-1-S!
SUBJECT # Mask ID #	6	20000 SCOTT-XM40 SMALL 	14500 SCOTT-XM-40 MEDIUM TM M-5-Y 7790 SCOTT-XM40	SCOTT-XM40 LARGE L-1-S! 455 SCOTT-XM40
SUBJECT # Mask ID # SUBJECT #	6	20000 SCOTT-XM40 SMALL 	14500 SCOTT-XM-40 MEDIUM TM M-5-Y 7790 SCOTT-XM-40 MEDIUM	SCOTT-XM40 LARGE L-1-S! 455 SCOTT-XM40
SUBJECT # Mask ID # SUBJECT #	6	20000 SCOTT-XM40 SMALL 0 SCOTT-XM40 SMALL S-2	14500 SCOTT-XM40 MEDIUM TM M-5-Y 7790 SCOTT-XM40 MEDIUM TM M-5-8	SCOTT-XM40 LARGE L-1-SI 455 SCOTT-XM40 LARGE
SUBJECT # Mask ID # SUBJECT # Mask ID #	6 7	20000 SCOTT-XM40 SMALL 0 SCOTT-XM40 SMALL S-2 20000 SCOTT-XM40	14500 SCOTT-XM-0 MEDIUM TM M-5-Y 7790 SCOTT-XM-0 MEDIUM TM M-5-B 20000 SCOTT-XM-0	SCOTT-XM40 LARGE L-1-SI 455 SCOTT-XM40 LARGE 0 SCOTT-XM40

.UBJECT #	9	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		*****	TM M-0	L-1-AV QAF
		0	19500	303
SUBJECT #	10	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-6	M-8	
		12400	20000	0
SUBJECT #	11	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-6	TM M-8	
•		20000	20000	0.
SUBJECT #	12		SCOTT-XM40	SCOTT-XM4
Mask ID #		SMALL	MEDIUM M-12 QAF	LARGE L-3
		0	101	26 197
SUBJECT #	13			STOTT-XMAD
Mask ID #			MEDION Menoral	LARGE L-4
		3		20000
SUBJECT #	1		SOOTT-XM40	SCOTT-XN→0
Mask (C. #		The State	MEDIUM M6	LARGE
		6-10	20000	0
7 N 90 7 #	15	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-7	M-5-B	
		20000	20000	0
SUBJECT #	16	SCOTT-XM40	SCOTT-XM40	SCOTT-XM49
Mask ID #		SMALL	MEDIUM TM M-7	LARGE L-19
		0	18100	19800

SUBJECT #	17	SCOTT-XM48 SMALL	SCUTT-XM40 MEDIUM	SCOTT-XM40
Mask ID #		S-3-Y	TM M-8	
		2340	20000	6
SUBJECT #	18	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		5- ⁸	M-5-Y QAF	
		19600	1570	0
SUBJECT #	19	SFOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-7	M-12	
		20000	17000	0
SUBJECT #	20	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			M-8	TM L-1-SI
		0	20000	20000
SUBJECT #	21	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
dask ID ‡			TM M-1	L-1-SI
		0	12800	5600
SUBJECT #	22	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-7	M-12 QAF	
		19260	2870	0
SUBJECT #	23	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-3-W	TM M-5-B	
		20000	20000	0
SUBJECT *	24	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-2 QAF	M-10	
		722	20000	0

;UBJECT :	\$ 25	SCOTT-XM40 SMALL		SCOTT-XM40 LARGE
Mask ID	*	S-5	TM M-1	
		19600	20000	6
SUBJECT :	\$ 26	SMALL	MEDIUM	SCOTT-XM40 LARGE
Mask ID :	#	S-2 QAF	TM M-5-B	
		4530	20000	0
SUBJECT :	\$ 27			SCOTT-XM49 LARGE
Mask ID	*		Tm m-7	L-10
		0	20000	20000
SUBJECT :	‡ 28	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID	+		M-5-Y QAF	L-1-AU GAF
		0	5450	286
SUBJECT :	2 9	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM48 LARGE
Jask ID	*	Th S-3	M-8	
		20000	20000	0
SUBJECT :	\$ 30	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID	ŧ	TM S-7	M-6	
		20000	20000	0
SUBJECT :	4 31	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID	ŧ	S-7	TM M-0	
		20000	20000	0
SUBJECT :	\$ 32	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID	+	TM S-6	M-1	LARGE
		20000	4520	0

SUBJECT #	33	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		5-5-ฝ	TM M-6	
		20000	19000	0
SUBJECT #	34	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-3	M-12 DAF	
		3230	436	0
SUBJECT #	35	_	SCOTT-XM40	SCOTT-XM40
Mask ID #		SMALL S-5-4	MEDIUM TM M-8	LARGE
			4110	
		403	1110	0
SUBJECT #	36			SEOTT-XM40
Mask ID #		SMALL TM S-5	MEDIUM M-6	LARGE
			1000	
		29000	1200	0
SUBJECT #	37	-		SCOTT-XM40
Mask ID #		SMALL S-2	MEDIUM TM M-10	LARGE
		637	8400	Û
SUBJECT #	38		SCOTT-XM40	SCOTT-XM40
Mask ID #		SMALL S-3	MEDIUM TM M-2	LARGE
		19800	20000	0
SUBJECT #	39		SCOTT-XM40	SCOTT-XM49
Mask ID ‡		SITALL	MEDIUM M-0	LARGE TM L-10
11034 12 4				2 10
		0	5620	10700
SUBJECT #	40	SCOTT-XM40	SCOTT-XM40	SCOTT-XM40
M1, 15 3		SMALL	MEDIUM	LARGE
Mask ID #			TM M-1 	L-10
		9	4570	20006

SUBJECT #	41	SCOTT-XM40 SMALL		SCOTT-XM40 LARGE
Mask ID #		TM S-2 QAF	M-8 QAF	
		124	461	0
SUBJECT #	42		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TM M-1	L-1-SI
		0	20000	2050
SUBJECT #	43	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-5	TM M-8	
		234ù	20000	9
SUBJECT #	44	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM49 LARGE
Mask ID #			TM M-6	L-10
		0	20000	20000
SUBJECT #	45	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-6	Th M-0	LHKGE
		7030	18690	0
SUBJECT #	46	SCOTT-XM40 SMALL	SCOTT-7.M40 MEDIUM	SCOTT-XM40 LARSE
Mask ID #			Tn M-7	L-1-AU GAF
		0	20000	16°
SUBJECT #	47	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XN40 LARGE
Mask ID #		S-3	TM M-6	
		20000	20000	0
SUBJECT #	48	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-7	M-5	Luce
		20000	8730	8

*UBJECT # Mask ID #		SMALL S-3	SCOTT-XM40 MEDIUM TM M-7	SCOTT-XM40 LARGE
			4530	0
SUBJECT #	50		MEDIUM	SCOTT-XM40 LARSE
Mask ID #			TM M-6	L-1
		0	29900	20000
SUBJECT #	51			SCOTT-XM46
Mask ID #		SMALL	MEDIUM TN M-5	LARGE L-10
1103K 10 4				
		0	115	20000
SUBJECT #	52	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40
Mask ID #				
		0	0	0
CONTECT A	5 7	CCOTT VM/A	CCOTT UM/A	SCOTT-XM40
SUBJECT #	72			
_		SMALL	MEDIUM	LARGE
lask ID #			MEDIUM	
_		SMALL	MEDIUM TM M-0	LARGE
lask ID #		SMALL 0 SCOTT-XM40	MEDIUM TM M-0	LARGE L-1-S1 QAF
lask ID \$ SUBJECT \$	54	SMALL 0 SCOTT-XM40 SMALL	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM	LARGE L-1-S1 QAF 1570
lask ID #	54	SMALL 0 SCOTT-XM40	MEDIUM TM M-0 20060 SCOTT-XM40	LARGE L-1-S1 QAF 1570 SCOTT-XM40
lask ID \$ SUBJECT \$	54	SMALL 0 SCOTT-XM40 SMALL	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM	LARGE L-1-S1 QAF 1570 SCOTT-XM40
lask ID \$ SUBJECT \$ Mask ID \$	54	SMALL O SCOTT-XM40 SMALL S-3 DAF 510 SCOTT-XM40	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM TM M-7 20000 SCOTT-XM40	LARGE L-1-S1 QAF 1570 SCOTT-XM40 LARGE 0 SCOTT-XM40
lask ID \$ SUBJECT \$ Mask ID \$	54	STALL 0 SCOTT-XM40 SMALL 5-3 QAF	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM TM M-7 20000	LARGE L-1-S1 QAF 1570 SCOTT-XM40 LARGE
lask ID \$ SUBJECT \$ SUBJECT \$	54	SMALL O SCOTT-XM40 SMALL S-3 DAF 510 SCOTT-XM40	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM TM M-7 20000 SCOTT-XM40 MEDIUM	LARGE L-1-S1 QAF 1570 SCOTT-XM40 LARGE 0 SCOTT-XM40 LARGE
lask ID \$ SUBJECT \$ SUBJECT \$	54 55	SMALL SCOTT-XM40 SMALL S-3 CAF 510 SCOTT-XM40 SMALL 0 SCOTT-XM40	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM TM M-7 20000 SCOTT-XM40 MEDIUM TM M-1 20000 SCOTT-XM40 MEDIUM TM M-1	LARGE L-1-S1 QAF 1570 SCOTT-XM40 LARGE 0 SCOTT-XM40 LARGE L-3 192 SCOTT-XM40
lask ID # SUBJECT # Mask ID # SUBJECT # SUBJECT #	54 55	SMALL SCOTT-XM40 SMALL S-3 QAF 510 SCOTT-XM40 SMALL 0 SCOTT-XM40 SMALL 0	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM TM M-7 20000 SCOTT-XM40 MEDIUM TM M-1 20000 SCOTT-XM40 MEDIUM TM M-1	LARGE L-1-S1 QAF 1570 SCOTT-XM40 LARGE 0 SCOTT-XM40 LARGE L-3 192
lask ID \$ SUBJECT \$ SUBJECT \$ Mask ID \$	54 55	SMALL SCOTT-XM40 SMALL S-3 CAF 510 SCOTT-XM40 SMALL 0 SCOTT-XM40	MEDIUM TM M-0 20060 SCOTT-XM40 MEDIUM TM M-7 20000 SCOTT-XM40 MEDIUM TM M-1 20000 SCOTT-XM40 MEDIUM TM M-1	LARGE L-1-S1 QAF 1570 SCOTT-XM40 LARGE 0 SCOTT-XM40 LARGE L-3 192 SCOTT-XM40

SUBJECT #		SCOTT-XM40 SMALL S-3-4 QAF	SCOTT-XM40 MEDIUM M-1-BE QAF	SCCTT-XM40 LARGE
		160	733	C
SUBJECT #	58	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCCTT-XM40 LARGE
Mask ID #			TM M-1-SI	L-1
		0	1350	18600
SUBJECT #	59	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TM #-1	L-1-SI
		9	20000	1360
SUBJECT #	60	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		5-6	TH #-7	
		2140	<i>7</i> 350	0
SUBJECT #	61			SCOTT-XM40
Mask ID #		SMALL	MEDIUM TM M-6	LARGE L-3
Hask ID &				-
		១	1380	18800
		U		
SUBJECT #	62	_	SCOTT-XM40	SCOTT-XM40
		SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	LARGE
SUBJECT #		SCOTT-XM40	SCOTT-XM40 MEDIUM Tri M-5	LARGE
		SCOTT-XM40 SMALL S-3-W	SCOTT-XM40 MEDIUM	LARGE
Mask ID ≇		SCOTT-XM40 SMALL S-3-W 20900 SCOTT-XM40	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40	LARGE 0 SCOTT-XM40
Mask ID #		SCOTT-XM40 SMALL S-3-W 20900 SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40 MEDIUM	LARGE
Mask ID ≇		SCOTT-XM40 SMALL S-3-W 20900 SCOTT-XM40	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40	LARGE 0 SCOTT-XM40
Mask ID #		SCOTT-XM40 SMALL S-3-W 20900 SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40 MEDIUM	LARGE 0 SCOTT-XM40
Mask ID # SUBJECT # Mask ID #	63	SCOTT-XM40 SMALL S-3-W 20000 SCOTT-XM40 SMALL S-7	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40 MEDIUM TM M-0	LARGE 0 SCOTT-XM40 LARGE
Mask ID # SUBJECT # Mask ID #	63 64	SCOTT-XM40 SMALL S-3-W 20000 SCOTT-XM40 SMALL S-7 20000 SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40 MEDIUM TM M-0 20000 SCOTT-XM40 MEDIUM MEDIUM	LARGE 0 SCOTT-XM40 LARGE
Mask ID # SUBJECT # Mask ID #	63 64	SCOTT-XM40 SMALL S-3-W 20900 SCOTT-XM40 SMALL S-7 20900 SCOTT-XM40	SCOTT-XM40 MEDIUM TM M-5 20000 SCOTT-XM40 MEDIUM TM M-0 20000 SCOTT-XM40	LARGE 0 SCOTT-XM40 LARGE 0 SCOTT-XM40

SUBJECT #	65	SCOTT-XM40 SMALL		SCOTT-XM40 LARGE
Mask iD #		TM S-6	M-7	
		20000	20000	0
SUBJECT #	66	SCOTT-XM40 SMALL	MEDIUM	SCOTT-XM40 LARGE
Mask IJ #		S. 3	TM M-6	
		20000	29000	0
SUBJECT #	67	SCOTT-XM40 SMALL		SCOTT-XM40 LARGE
Mask ID ≇			TM M-5	L-3
		9	20006	20000
SUBJECT #	68	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XN40 LARGE
Mask ID #			M-3	TM L-3
		0	14300	20000
SUBJECT #	69	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TM H-1	L-18
		0	20000	5220
SUBJECT #	70	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LAPSE
Mask ID #		5-6	TM M-7	
		20000	7810	0
SUBJECT #	71	SCOTT-XM46 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			M-1	L-1-S1 Q AF
		0	599	2190
SUBJECT #	72	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM48 LAPGE
Mask ID #		**********	8-m mT	L-1-SI CAF
		0	20060	7 0 9

SUBJECT #		SCOTT-XM40 SMALL TM S-8	SCOTT-XM40 MEDIUM M-7	SCOTT-XM49 LARGE
1,001.				
		20000	20000	0
SUBJECT #	74	SCOTT-XM40 SMALL TM S-2	SCOTT-XM40 MEDIUM M-0	SCOTT-XM40 LARGE
1.03K 10 ¥				
		20000	622	9
SUBJECT # Mask ID #	-	SCOTT-XM40 SMALL S-6	SCOTT-XM40 MEDIUM TM M-2-SI	SCOTT-XM40 LARGE
		13400	 169G	 0
		17400	1970	8
SUBJECT #	76	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-5	Tr: M-7	
		747	20000	0
SUBJECT #	77		SCOTT-XM40	SCOTT-XM40 LARGE
Mask ID #			TM M-1	L-10
		0	662	19000
SUBJECT #	78		SCOTT-XN40 MEDIUM	SCOTT-XM48
Mask ID #			Tn n-3	L-3
		0	20000	653
SUBJECT #	79	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TH M-2-SI	L-10
		0	20000	20009
SUBJECT \$	90	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TM M-0	L-1
		0	20000	20000

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SUBJECT #	81		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		******	M-2-SI	TM L-1
		0	20009	20000
SUBJECT #	82		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			M-8	TM L-19
		0	20000	20000
SUBJECT #	83		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-7	M-0	
		20000	18600	0
SUBJECT #	84	SCOTT-XM40	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-5	M-1-BE	
		20000	10200	0
SUBJECT #	85	SCRTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID ‡		S-5	TM M-8	
		20000	12800	0
SUBJECT #	86	SCGTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TM M-1-BE	L-2
		0	20000	20060
SUBJECT #	87	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-7	M-5	
		20000	10500	0
SUBJECT #	88		SCOTT-XM40	SCOTT-XM40
Mask ID #		SMALL	MEDIUM TM M-6.	LARGE L-2
		0	1720	7510

		SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID 4	!		M-1	TM L-10
		0	20000	20000
SUBJECT (SCOTT-XM40 SMALL S-5	SCOTT-XM40 MEDIUM TH M-0	SCOTT-XM40 LARGE
1465K 10 1	•			
		20000	20000	0
SUBJECT 4		SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM TM M-5	SCOTT-XM40 LARGE L-3
		9	20000	561
SUBJECT 4	92	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID 4	•	*	Tm M-1	L-10
		0	255	20000
SUBJECT 4	93	SEOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
ಗask ID 4	;		M-6	TH L-3
		0	2040	182
SUBJECT :	94	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID 4	‡	5-6	Tm m-8	
		20090	20000	6
SUBJECT 4	95	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID 1	‡	S-6	8-m mT	
		16700	23000	0
SUBJECT 4	ŧ 7 6	16700 SCOTT-XM40 SMALL	20000 SCOTT-XM40 MEDIUM	0 SCOTT-XM40 LARGE
SUBJECT &		SCOTT-XM40	SCOTT-XM40	SCOTT-XM40

BUBJECT #	97	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		TM S-6	M-1-8E	LHK6E
		100	100	0
SUBJECT #	98	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-5	TM M-1-8E	
		29900	16000	0
SUBJECT #	99		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #			TM M-2-SI	L-10
		0	2210	20000
SUBJECT #	190			SCOTT-XM40
Mask ID #		SMALL TM S-7	MEDIUM M-2-51	LARGE
		20000	2950	0
SUBJECT #	101	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mesk ID #		TM S-5	M-5	
		5100	20000	0
SUBJECT #	102	SCOTT-XM40 Small	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID #		S-7	TM M-0	
		20000	1960	0
SUBJECT #	103	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE
Mask ID \$			H-1	TM L-2
		0	20000	19600
SUBJECT #	104	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCŪTT-XM40 LARSE
Mask ID #				TM L-1
		0	0	20000

SUBJECT #	105		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE	
Mask ID #		S-6	TM M-5		
		7500	20000	0	
		SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE	
Mask ID #		TM S-5	M-1-BE		
		20000	7710	0	
SUBJECT #	107	SEOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	500TT-XM40 LARGE	
Mask ID #		TM S-6	M-2-SI		
		5070	20000	0	
SUBJECT #	108		SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE	
Mask ID ₹		TM S-5	M-8		
		29000	20000	0	
SUBJECT #	109		SEOTT-XM40	SCOTT-XM40	
		STIALL	MEDIUM	LARGE	
Mask ID #			TM M-1-BE	L-10	
		0	2070	20000	
SIBJECT #	110	SCOTT-XM40	SCOTT-XM40	SCOTT-XM40	
		SMALL	MEDIUM	LARGE	
Mask ID #		S-6	TM M-1		
		29000	3320	0	
SUBJECT #	111	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE	
Mask ID \$				TM L-2	
		0	9	949	
SUBJECT #	112	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM	SCOTT-XM40 LARGE	
Mask ID #		S-7	TM M-0		
		20000	20006	0	

SUBJECT # Mask ID #	113	SCOTT-XM48 SMALL	SCOTT-XM40 MEDIUM - M-6	SCOTT-XM40 LARGE TM L-1
		0	20000	111
SUBJECT # Mask ID #	114	SCOTT-XM40 SMALL	SCOTT-XM40 MEDIUM TM M-7	SCOTT-XM40 LAPGE L-1
		0	 5510	100

Passa Lecenseral Material Passa Meditaria Mensional Mensions and Passa Mensions and Passa Mensions and Passa Mensions and Passa Mension an

SCOTT-XM40 SIZE DETERMINATION

Subject 🕹	Pf	Photo	Best Fit	Comments
+ 1	S	S-M	S	M PF LOW
+ 2	S-M	S-H	Ħ	
+ 3	H	н	H	S PF LOW
• 4	S-M	S-H	S-H	
+ 5	S-M	S	S	
+ 6	H	н	Ħ	S PF LOW
+ 7	S-M	S-M	Ħ	
+ 8	M-L	H-L	H	
+ 9	H	н	Ħ	L PF LOW
+ 10	s-M	S-M	S	
+ 11	s-n	S-M	н	
12			QAF	
13			QAF	
+ 14	s-M	S-M	Ħ	
+ 15	S-M	S-M	S	
+ 16	M-L	M-L	H	
+ 17	н	M	H	S PF LOW
18	******		QAF	
+ 19	S-M	S-M	S	
+ 20	M-L	M-L	L	
+ 21	н	H	n	L PF SLIGHTLY LOW
22				
			QAF	

	24			QAF	
Sub	ject #	Pf	Photo	Best Fit	Comments
+ :	25 (70)	S-M	s-M	н	
:	26			QAF	
+ :	27 (61)	M-L	M-L	н	
:	28 (72)			QAF	
+ :	29 (65)	S-M	S-M	S-M	
+	30 (63)	S-M	S-M	S-M	
+	31	S-M	s-M	н	
+	32	S	S	S	M PF LOW
+	33 (62)	s-M	S-M	н	
	34			QAF	
+	35	м	н	н	BOTH PF LOW
•	36 (100)	s	s	S	M PF LOW
+	37 (66)	н	н	н	S PF LOW
+	38	S-M	5-M	H	
+	39 (68)	L	L	L	H PF LOW
+	40	L	M-L	L	M PF SLIGHTLY LOW
	41 (64)			QAF	
+	42 (59)	M	н	н	L PF LOW
+	43	м	н	н	S PF LOW
+	44 (67)	M-L	M-L	н	
•	45	S-M	н	M	
	46 (69)			QAF	
+	47	s-M	s-M	n	
+	48	S-M	s	s	
+	49	S	S-M	s	M PF SLIGHTLY LOW
+	50	M-L	M-L	162 M-L	

Subjec	ct #	Pf	Photo	Best Fit	Comments
+ 51		L	M-L	L	M PF LOW
52		NO TEST			
53				QAF	
54				QAF	
+ 55		н	M-L	Ħ	L PF LOW
+ 56		S-M	м	H	
57				QAF	
+ 58		L	M-L	L	M PF LOW
59	(42)	н	н	н	L PF LOW
+ 60		H	M	н	S PF LOW
61	(27)	L	M-L	L	M PF LOW
62	(33)	s-M	s-m	H	
63	(30)	S-M	S-M	н	
64	(41)			QAF	
65	(29)	S-M	s-m	S-M	
66	(37)	S-M	S-M	s-M	
67	(44)	M-L	H-L	M-L	
68	(39)	H-L	M-L	L	
69	(46)	н	M-L	н	L PF SLIGHTLY LOW
70	(25)	S-M	s-H	s	
71				QAF	
72	(28)			QAF	
+ 73		s-M	S-M	s	
+ 74		S	S-M	s	M PF LOW
+ 75		s	S-M	s 63	M PF LOW
+ 76		М	H	M	S PF LOW

Subject #	Pf	Phote	Best Fit	Comments
+ 77	Ĺ	M-L	L	H PF LOW
+ 78	н	н	H	L PF LOW
+ 79	M-L	M-L	Ħ	
+ 80	H-L	H-L	Ħ	
+ 81	M-L	M-L	M-L	
+ 82	H-L	H-L	M-L	
+ 83	S-M	S-H	s-H	
84 (56)	S-M	s-n	S	
+ 85	S-M	S-M	H	
+ 86	M-L	M-L	H-L	
+ 87 (102)	S-M	S-M	S	
+ 88	L	H-L	L	H PF LOW
+ 89	M-L	H-L	H-L	
+ 90	S-M	S-M	н	
+ 91	н	H-L	н	L PF LOW
+ 92	L	H-L	L	M PF LOW
+ 93	н	M-L	Ħ	PF LOW ON BOTH
+ 94	S-H	S-M	S	
+ 95	S-M	S-M	H	
+ 96 (54)	S	S	S	M PF LOW
+ 97		S-M	HARD	TO EVALUATE PF VERY LOW ON BOTH
+ 98	S-M	S-M	s	
+ 99	L	M-L	L	M PF LOW
100 (36)	s	S	S	M PF LOW
+ 101	H	S-M	m 164	5 FF SLIGHTLY LOW
102 (87)	s	S-M	10 4 S	H PF LOW

Subject #	Pf	Photo	Best Fit	Comments
+ 103	K L	M-L	H-L	
+ 104	L	K-L	ī.	PF DATA ON H MASK LOST
+ 105	S-M	S-M	н	
+ 106	s-H	S	S	
+ 107	н	S-M	H	S PF SLIGHTLY LOW
+ 198	S-M	S	s	
+ 109	I	M-L	L	H PF LOW
+ 110	S	S-X	s	H PF LOW
111	DATA MI	SSING		
+ 112	s-M	s-m	н	
+ 113	н	M-L	Ħ	r se rom
+ 114	M	Ħ	н	L PF LOW

APPENDIX 63

ILC XM40 Protection Factor Data and Summary

ILC-XM40

SUBJECT #	_	SMALL	ILC-XM40 HED!UM M-6	ILC-XM40 LARGE
		181	20006	0
SUBJECT #		ILC-XM40 SMALL TM S-1	ILC-XM40 MEDIUM M-25	ILC-XM40 LAPSE
Lest ID 4		20000	20000	o 0
		ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID \$		S-F	TM M-6	
		10500	6840	e
SUBJECT #	4	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-X140 LARGE
Kark ID ≇		S-18	TM M-5-B	
		8500	7500	0
		ILC-XM40 SMALL	ILC-X1140 MEDIUM	ILC-X1140 LARGE
Yask ID #		5-18	TM M-3 GAF	
		1140	203	0
SUBJECT #	ó	ILC-XM40 SMALL	MEDIUM	ILC~XM≐9 LARGE
Mask ID #			TM H-1	<u>L-3</u>
		0	1690	100
SUBJECT #	7	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-19	M-1	
		595	20000	0
SUBJECT #	8	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM48 LARGE
Mask ID #			H-2	TM L-1-CP
		0	20000	29000

SUBJECT # Mask ID #		SMALL S-4	ILC-XM40 MEDIUM TM M-6	ILC-XM40 LARGE
			514	0
SUBJECT # Mask ID #			ILC-XM40 MEDIUM M-2	ILC-XM40 LARGE
		17600	2470	0
SUBJECT # Mask ID #			ILC-XM40 MEDIUM TM M-5	ILC-XM40 LARGE
		18300	4610	0
SUBJECT # Mask ID #		SMALL	MEDIUM TM M-8	ILC-XM40 LARGE L-1-8E
		0	20990	20000
SUBJECT #			ILC-XM40 MEDIUM M-16 C AF	ILC-XM40 LARGE
		15009	886	6
SUBJECT # Mask ID #		SMALL	ILC-XM40 MEDIUM M-25 CAF	ILC-XM40 LARGE
		15300	1860	บ
SUBJECT # Mask ID #	15	ILC-XM40 SMALL S-5	ILC-XM40 MEDIUM TM M-2	ILC-XM48 LARGE
		20000	1990	0
SUBJECT #	16	ILC-XM40 SMALL TM S-5	ILC-XM40 MEDIUM M-5	ILC-XM40 LARGE
		20000	20000	0

	_	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TH S-19	M-6	
		452	5990	0
SUBJECT #	18	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			TM N-5	L-1-BE
		0	1050	20000
SUBJECT #	19	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XN40 LARGE
Mask ID #		S-1	TM M-8	
			437	0
SUBJECT #	20	ILC-XM48 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			M-1	TM L-1-CR
		0	20000	1520
SUBJECT #	21	ILC-XM40 SMALL	ILC-XM48 MEDIUM	ILC-XM40 LARSE
.1ask ID #			M-8	TM L-1-BE
		0	791	29300
SUBJECT #	22			ILC-XM40
Mask ID #		SMALL TH S-4	MEDIUM M-25	LARGE
11.00K 10 %		-		
		20060	20990	Ú
SUBJECT #	23	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM46 LARGE
Mask ID #		S-4	M-16 QAF	
		20000	1370	0
SUBJECT #	24	ILE-XM40	ILC-XM40	ILC-XM40
Mark ID &		SMALL TM C 14	MEDIUM M.E	LARGE
Mask ID #		TM S-14	M-5	
		20090	20009	9

SUBJECT #	_	ILC-XM40 SMALL S-2	ILC-XM40 MEDIUM TM M-5	ILC-XM40 LARGE
HOSK ID T		J-2		
		957	1480	0
SUBJECT #	26		ILC-XM40 MEDIUM	ILC-Xh40 LARGE
Mask ID #		S-5	TM M-1	
		906	20000	0
SUBJECT #	27	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			TM M-2	L-1-CP
		0	20000	2020
SUBJECT #	28	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		5-1	TM M-25	
		14500		9
SUBJECT #	29	ILC-XM40 SMALL	ILC-XM49 MEDIUM	ILC-XM40 LARGE
₁1ask ID #		TM S-5-Y	11-5	
		20000	2550	S
SUEJECT #	30	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LAPGE
Mara ID 🛊		TM S-1	m-1	
		20000	20000	0
SUBJECT #	31	ILC-X1140 STALL	ILC-XM40 MEDIUM	ILC-XT48 LARGE
ffask ID ≇		TM S-2	M-2	
		20006	1170	0
SUBJECT #	32	ILC-XM40 SMALL	ILC-XM40 MEDILM	ILC-X140 LARGE
Mask ID #		TM S-14	M-6	
		136	20000	9

		ILC-XM40 SMALL	MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-18	M-8	
		20000	20000	0
SUBJECT #	34	ILC-XM48 SMALL	MEDIUM	ILC-XM40 LARGE
Nask ID 🕏		TM S-8	M-25 GAF	
		20000	134	0
SUBJECT #	35	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM 5-4	พ- 6	
			8 ⁵ 6	9
SUBJECT \$	36	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-X1140 LARGE
Mask ID #		TM S-19	M-16 QAF	
		20000	160	0
SUBJECT ŧ	37	ILC-XM40	ILC-XM40	ILC-XM40
		SMALL	redium	LARGE
≾ask ID \$		5-4	Tm M-25	
		5560	20000	0
SUBJECT #	38	ILC-XM40	ILC-XM40	ILC-XK40
		SHALL	MEDIUM	LARGE
Mask ID #		5-8	M-16 09F	
		20009	1400	0
SUBL CT #	39	ILC-XM40 SMALL	ILC-X1148 MEDIUM	ILC-XM40 LARGE
Mask ID #			Tm m-8	L-i-CR
		0	25÷0	17708
SUBJECT #	46	ILC-XM40	ILC-XM40	ILC-XM40
		SMALL	MEDIUM	LARGE
Mask D #		S-19	TM M-3	

SUBJECT #		ILC-XM40 SMALL TM S-19	ILC-XM40 MEDIUM M-6	ILC-XM40 LARGE
		378	20000	0
SUBJECT #	42	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			M-16 CAF	L-1-CR
		0	319	2970
SUBJECT #	43	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-14	TH M-2	
		397	20060	0
SUBJECT #	44	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			TM M-5	L-2
		0	20000	20000
SUBJECT #	45	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
đask ID ≇		S-19	Tm M-8	
			505	S
SUBJECT #	46	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LAPGE
Mask ID #		TH S-5	M-2	
		20000	20000	0
SIJBJECT #	47	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARSE
Mask ID \$		TM 5-2	H_5	
		1120	159	9
SUBJECT #	48	ILC-XM40 SMALL	ILC-XM48 MEDIUM	ILC-XM≤0 LARSE
Mask iŪ ‡		S-5-Y	TM 17-6	- +
		13406	143	e

SUBJECT \$		SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-1	M-5	
		100	13200	0
		SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-14	TM M-5	
		19800	20000	0
SUBJECT #	51		ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID ‡		TM S-18	ĭ1−3	
			19600	0
SUBJECT #	52	ILC-XM48 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #				
		0	0	0
SUBJECT &	53		ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-18	TM M-3	
		443	16600	0
SUBJECT #	54	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-2	M-1	
		5440	100	0
SUBJECT *	55	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-8	m-s	
		100	2590	0
SUBJECT #	56	ILC-X1140 SMALL	ILC-XM40 MEDIUM	ILC-X1140 LARGE
Mask ID 🛊		Th S-14	M-6	
		20000	449	0

SUBJECT #	57	ILC-XM40 SMALL	ILC-XM40 MEDIUM	iLC-XM40 LARGE
Mask ID #		S-1	TM M-1	
		20000	2050	0
SURJECT #	58	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-5	TM M-0	
		613	1800	0
SUBJECT #	59	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			TM N-6	L-1-8E
		0	20000	19900
SUBJECT #	60	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-7 DAF	8-M	
		100	3880	0
SUBJECT #	61	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARSE
dask ID ≇			TM M-8	L-1
		0	20900	20000
SUBJECT #	62	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM⇔0 LARGE
Mask ID #		TM S-18	M-1	
		1240	20000	0
SUBJECT #	63	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-1	M-ó	
		20000	5880	0
SUBJECT #	64		ILC-XM40	ILC-XM40
SUBJECT # Mask ID #		ILC-XM40 SMALL TM S-5	ILC-XM40 MEDIUM M-0	ILC-XM40 LARGE

SUBJECT #	65		ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TH S-14	M-2	
		232	1530	0
-		SMALL	ILC-XM48 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-14	M-8	
		20000	18500	0
SUBJECT #	67		ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			TM M-5	L-1-BE
		0	789	20000
SUBJECT #	68	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #			TM M-3	L-1
		0	430	20000
SUBJECT #	69	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-18	M-6	
		322	2098	0
SUBJECT #	70	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		5-19	TM M-1	
		16300	3130	9
SUBJECT #	71	16300		
SUBJECT ‡ Mask ID ‡	71	16300 ILC-20140	3130 ILC-XM40	0 ILC-XM40
	71	16300 ILC-XM40 SMALL	3130 ILC-XM40 MEDIUM	0 ILC-XM40
		16300 ILC-XM40 SMALL TM S-8	3130 ILC-XM40 MEDIUM M-8 11900	1LC-XM40 LARGE 0
Mask ID #		16300 ILC-XM40 SMALL TM S-8	3130 ILC-XM40 MEDIUM M-8	0 ILC-XM40 LARGE

Kidikiliya wa Araji u wa mananana ja janaha ka ka ka ka ka ka wa wa wa wa ka ka ka ka ka manana wa wa manana w

Nask ID #		ILC-XM40 SMALL TM S-14	ILC-XM40 MEDIUM M-2	ILC-XM40 LARGE
		573	394	0
SUBJECT #		SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-5	TM M-5	
		20000	13700	0
SUBJECT # Mask ID #		ILC-XM40 SMALL TM S-2	ILC-XM40 MEDIUM M-8	ILC-XM48 LARGE
nesk 15 4				
		14500	7628	0
SUBJECT #		SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-7	TM M-1	
		2500	415	0
SUBJECT #	77	ILC-XM40	ILC-XM40	ILC-XM40
1		SMALL	MEDIUM	LARGE
nask ID ‡		S-1	TM M-6	
		17700	8630	0
SUBJECT #	<i>7</i> 8	ILC-XM40	ILC-XM40	ILC-XM40
		SMALL	MEDIUM	LARGE
Mask ID #			TM M-3	L-1
		0	1890	1420
SUBJECT #	79		ILC-XM40	ILC-XM40
M(70 8		SMALL	MEDIUM	LARGE
Mask ID #		S-4	TM M-3	
		20000	20000	0
SUBJECT #	88	ILC-XM40	ILC-XM40	ILC-XM40
		SMALL	MEDIUM	LARGE
Mask ID #		S-14	TM M-6	
		262	20000	0

JUBJECT #	81		ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		********	TM M-0	L-1
		0	20000	20000
SUBJECT #	82	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		5-2	TM M-5	
		20000	20000	0
SUBJECT #	83	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-1	M-4	
		20000	100	0
SUBJECT #	84	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARSE
Mask ID #		TM S-4	M-2	
		20000	861	0
SUBJECT #	85	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Jask ID #		S-19	TM M-1	
		20000	20000	0
SUBJECT #	86	20000 ILC-XM40 SMALL	20000 ILC-XM40 MEDIUM	u ILC-XM40 LARGE
SUBJECT #		ILC-XM40	ILC-XM40 MEDIUM TM M-2	ILC-XM40
•		ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40
•		ILC-XM40 SMALL S-1 4760 ILC-XM40	ILC-XM40 MEDIUM TM M-2 20000 ILC-XM40	ILC-XM40 LARGE
Mask ID #		ILC-XM40 SMALL S-1 4760	ILC-XM40 MEDIUM TM M-2 20000	ILC-XM40 LARGE 0 ILC-XM40
Mask ID #		ILC-XM40 SMALL S-1	ILC-XM40 MEDIUM TM M-2 20000 ILC-XM40 MEDIUM	ILC-XM40 LARGE 0 ILC-XM40
Mask ID #	87	ILC-XM40 SMALL S-1 4760 ILC-XM40 SMALL S-19	ILC-XM40 MEDIUM TM M-2 20000 ILC-XM40 MEDIUM TM M-6	ILC-XM40 LARGE 0 ILC-XM40 LARGE 0 ILC-XM40
Mask ID # SUBJECT # SUBJECT #	87	ILC-XM40 SMALL S-1 4760 ILC-XM40 SMALL S-19	ILC-XM40 MEDIUM TM M-2 20000 ILC-XM40 MEDIUM TM M-6 2120 ILC-XM40 MEDIUM MEDIUM	ILC-XM40 LARGE 0 ILC-XM40 LARGE 0 ILC-XM40 LARGE LARGE
Mask ID # SUBJECT # Mask ID #	87	ILC-XM40 SMALL S-1 4760 ILC-XM40 SMALL S-19	ILC-XM40 MEDIUM TM M-2 20000 ILC-XM40 MEDIUM TM M-6 2120 ILC-XM40	ILC-XM40 LARGE 0 ILC-XM40 LARGE 0 ILC-XM40

SUBJECT #	89	ILC-XM40 SMALL	MEDIUM	ILC-XM40 LARGE
Mask ID #			M-8	TM L-3
		0	20000	20000
SUBJECT #	90	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-4	Tm m-8	
		6280	521	0
SUBJECT #	91	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		TM S-4	M-1	
		20000	17900	0
SUBJECT #	92	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		S-2	TM M-2	
		20000	10700	9
SUBJECT #	93	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
.1ask ID #			M-5	TM L-1-8E
		^		 2550
		0	100	2990
SUBJECT #	94	ILC-XM40	ILC-XM40	ILC-XM40
		ILC-XM40 SMALL	ILC-XM40 MEDIUM	
SUBJECT # Mask ID #		ILC-XM40	ILC-XM40	ILC-XM40
		ILC-XM40 SMALL TM S-19	ILC-XM40 MEDIUM	ILC-XM40
		ILC-XM40 SMALL TM S-19 17300 ILC-XM40	ILC-XM40 MEDIUM M-3 814 ILC-XM40	ILC-XM40 LARGE 0 ILC-XM40
Mask iD # SUBJECT #		ILC-XM40 SMALL TM S-19 17300 ILC-XM40 SMALL	ILC-XM40 MEDIUM M-3 814 ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID #		ILC-XM40 SMALL TM S-19 17300 ILC-XM40	ILC-XM40 MEDIUM M-3 814 ILC-XM40	ILC-XM40 LARGE 0 ILC-XM40
Mask iD # SUBJECT #		ILC-XM40 SMALL TM S-19 17300 ILC-XM40 SMALL	ILC-XM40 MEDIUM M-3 814 ILC-XM40 MEDIUM	ILC-XM40 LARGE 0 ILC-XM40
Mask iD # SUBJECT #	95	ILC-XM40 SMALL TM S-19 17300 ILC-XM40 SMALL S-14	ILC-XM40 MEDIUM M-3 814 ILC-XM40 MEDIUM TM M-6 3490 ILC-XM40	ILC-XM40 LARGE 0 ILC-XM40 LARGE 0
Mask ID # SUBJECT # Mask ID # SUBJECT #	95	ILC-XM40 SMALL TM S-19 17300 ILC-XM40 SMALL S-14 20000 ILC-XM40 SMALL	ILC-XM40 MEDIUM M-3 814 ILC-XM40 MEDIUM TM M-6 3490 ILC-XM40 MEDIUM	ILC-XM40 LARGE 0 ILC-XM40 LARGE
Mask ID \$ SUBJECT \$ Mask ID \$	95	ILC-XM40 SMALL TM S-19 17300 ILC-XM40 SMALL S-14	ILC-XM40 MEDIUM M-3 814 ILC-XM40 MEDIUM TM M-6 3490 ILC-XM40	ILC-XM40 LARGE 0 ILC-XM40 LARGE 0

SUBJECT #			ILC-X:140 MEDIUM M-2	ILC-XH40 LARGE
		*****************	100	 0
		700	100	U
SUBJECT #	98	SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARSE
Mask ID #		Th 5-4	M-3	
			370	Ç.
SUBJECT #	99	ILC-XM40 SMALL	II-C-XM46 MEDIUK	ILC-XM40 LARGE
Masi- ID €		****	TM L-2	L-2
			5120	100
SUBJECT #	109		ILC-XM40 MEDIUM	ILC-XM40 LARGE
# GI wash		-	M-8	
		10190	566	0
SUBJECT #	161		ILC-X0140	JLC-XM40
Jack ID ≇		SMALL YM L-1-SI	nEotu∺ M-1	LARGE
1000				
		709	28978	0
SUBJECT *	103		ILC-XM40	ILE-X140
Mask ID #		SMALL TM M-7	MEDIUM M-5	LARGE
		10400	192	3
SUBJECT #	103			ILC-XM40
Mask ID #		SMALL	MEDIUM TM M-3	LARGE L-3
		0	2860	20900
SUBJECT \$	104	ILC-XM40	ILC-XM40	ILC-XM40
Mask ID \$		SMALL	MEDIUM TM M-G	LARGE L-2
		9	1470	23509

JUBNECT &		ILC-XM40 SKALL S-2	TM M-5	ILC-XM40 LARGE
		20000	13700	0
SUBJECT #			ILC-X740 MEDIUM TM M-2	ILC-XM48 LARGE
	-	11800	537	8
•		SMALL	ILC-XN40 MEDIUM M-6	ITC-XXXC
II924 ID 4			6890	6
SUbJECT #	108		TLC-XMAU	ILC-XM40 LARGE
Mask ID #		Th S-9	n-8	
		20990	12500	0
SUBJECT #			ILC-XM40 MEDIUM TM M-5	ILC-X1146 LARGE
Hask IV 4				L-3 1270
SUBJECT #	119		ILC-X140 MEDIUTI	ILC-XM40 LARSE
Mask ID #		S-1	TM M-1	
			5000	0
SUBJECT #	111	ILC-X1/40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LAREE
Mask ID \$			TK 11-8	L-1
		3	15000	20006
SUBJECT *	112	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask ID +		S-5	TN M-6	
		14300	1006	Û

SUBJECT #	113	ILC-AH47 SHALL	ILC-XM40 MEDIUM M-3	ILC-XM40 LARGE TM L-1-83
•		U	20000	3440
SUSJECT #	114	ILC-XM40 SMALL	ILC-XM40 MEDIUM	ILC-XM40 LARGE
Mask 10 #			TH M-2	L-2
		0	285	573

ILC-XM40 SIZE DETERMINATION

Subject #	Pf	Photo	Best Fit	Comments
+ 1	н	n-s	n	S PF LOW
+ 2	s-n	S-H	Ħ	
+ 3	S-M	м	н	
+ 4	S-M	H	н	
5		G	AF	
+ 6	H	H	Ħ	r be ron
+ 7	н	н	н	S PF LOW
+ 8	M-L	M-L	L	
+ 9	s	н	s	PF LOW ON BGIF
+ 10	s	s	S	H PF LOW
+ 11	2	S-M	5	H PF SLICHTLY LOW
+ 12	H-L	*	H-L	* PHOTO OF E F MISSING
13			QAF	
14			QAF	
+ 15	5	s-H	s	H PF LOW
+ 16	s-n	Ħ	н	
+ 17	H	s-m	M	S PF LOW
+ 18	L	H-L	L	m pr low
+ 17	s	5-ห	s	H PF LOW
+ 20	H	H-L	н	L PF LOW
+ 21	<u>r</u>	L	L	M PF LOW
+ 22	S-H	s-n	S	

Subject #	Pf	Photo	Best Fit	Comments
+ 24	5-H	Š-X	s	
÷ 25 (70)	H	s-M	H	PF LOW ON BOTH
+ 26	н	н	Ħ	S PF LOW
· 27 (61)	н	Ħ	н	L PF LOW
+ 28 (72)	S-M	S-M	n	
+ 37 (65)	s	s	s	A BE TOM
+ 30 (63)	S-H	s	3	N NOSE CUP IN GYES
+ 31	s	5-H	\$	n et ic u
+ 32	H	S-M	н	s pe lov
+ 33 1421	5-M	S-M	S	
34			- CAF	
÷ 35	s	5	S	H PF LOW
36 (196)			- GAF =	
+ 37 (66)	H	Ħ	K	S PF LOW
38		·	- QAF	
+ 39 (68)	L	M-L	L	M PF LOW
+ 60	H	н	н	S PF LOW
+ 41 (64)	Ħ	S-M	F	S PF LOW
42 (59)		~/	- QAF	
+ 43	н	ĸ	м	S PF LOY
+ 44 (47)	H-L	M-L	L	
+ 45	ŝ	S-H	è	H PF LOW
+ 46 (69)	s-M	s	5	
÷ 47	s	\$-#	5	KTO2 NG WG1 19
+ 48	ş	S-M	183 S	n Pš low
+ 49	н	5-M	н	S PF LGW

S	rbject #	Pf	Photo	Best Fit	Comments
•	55	3-X	Ħ	Ħ	
+	51	s-n	5~B	5	
	\$3			QAF	
+	53	M	ĸ	Ħ	s Pr Loy
÷	54 (95)	s	s	5	H PF LOW
+	55	Ħ	н	Ħ	PP 204 OK BOTH
+	54 (84)	5	s	Ş	M PF LOW
+	57	S	S-X	3	N PF SEIGHTLY LOW
+	58	H	H	M	PF LOW ON BOTH
÷	59 (42)	H-L	H-I	H-L	EITHER MASK SIZE OK
+	50			QRF	****
	41 (27)	M-L	K-L	H-L	EITHER HASK SIZE OK
	62 (33)	Ħ	S-M	H	s pr lo#
	63 (30)	s-M	\$	s	M PF SLICHTLY LOW
	54 (41)	S	S-M	s	H PF SLIGHTLY LOW
	45 (29)	н	S-H	н	PF LOW ON BOTH
	66 (37)	S-M	S-M	M	
	67 (44)	L	H-L	£	M PE LOV
	68 (3 9)	Ľ	K-1	L	m pr lov
	£9 (46)	н	S-K	H	S FE LOW
	70 (25)	s	S-3	S	M PF SLIGHTLY LOW
+	71	S-M	S-M	Ħ	
	72 (28)	S-M	ร-ส	H	
+	73	s-M	s <u>1</u>	s .84	PF LOW ON BOTH
+	74	S-M	н	M	
•	75	5-H	S	S	H NOSE CUP IN EYES

Subject #	Pf	Photo	Best Fit	Comments
+ 75	s	s	s	PF LOW ON BOTH
+ 77	S-M	S-H	s-m	
+ 78	H-L	M-L	н	PF LOW ON BOTH
+ 79	S-M	2-M	s-n	
+ 8e	H	ĸ	ĸ	S PF LOW
+ 81	M-L	M-L	M-L	
+ 32	s-A	Ħ	н	
÷ 83	\$	s-K	s	H SE TOM
84 (56)	s	s-x	s	H PF LOW
÷ 55	S-M	S-X	s-m	
÷ 88	H	H	Ħ	S PF SLIGHTLY LOW
+ 87 (192)	s	K-S	s	M PF LOW
÷ 58	L	M-L	L	M PF LOW
+ 33	K-L	M-L	H	
+ 90	S	Ħ	s	M PF LOV
+ 91	5- M	s-H	s	
+ 92	S-M	S-M	Ħ	
÷ 93	L	M-L	£	M PF LOW
+ 9 4	\$	S-X	s	M PF LOW
+ \$3	s	S-X	s	M PF LGW
76 (54)	s	\$	8	M PF LCW NOSE CUP IN EYES
+ 77	_	E-M	•	BOTH MASK HAD POOR PF's
+ 98	S	S	s	M PF POOR NOSE CUP IN EYES
+ 79	ĸ	H-I 18	. H .5	I PF LOW
+ 100 (36;	5	3	s	M PF LCW
+ 101	H	3-X	Ħ	s pr lov .

SOME AND PROPERTY OF THE PROPERTY OF THE PARTY OF THE PAR

St	bject #	Pf	Photo	Best Fit	Comments
	102 (57)	s	S	s	M PF LOW
+	103	L	M-L	L	M PF SLIGHTLY LOW
+	104	L	M-L	£	M PF SLIGHTLY LOW
+	105	S-M	S-M	н	
+	106	S	S-M	S	M PF LOW
÷	107	S-M	s	s	
+	108	5-M	S-M	s	
+	197	×	M-L	н	L PF LOW
+	110	S-M	s-m	S	M PF SLIGHTLY LOW
•	111	H-L	M-L	M-L	
÷	112	s	ĸ	s	
+	113	н	M-L	н	L PF SLIGHTLY LOW
+	114	-	H-L	ĸ	BOTH PF ARE LOW

APPENDIX 64

Anthropometric Data by Subject

S/N:		Sex: M Race: W	HITE	Age: 20)
وي وي الم			الله الله الله الله الله الله الله الله		
		sk Size Category			
MASK	· ·	Alternate Size		Alternate 	Siz
ILC	S !	M			···
SCATT	! M	S			•
AVON USIO	: 5	M			
		2. Wei			
. Face Si	ze – Adjustabl	e Metric Template	e Circumferenc	e	<u>cm</u> 13
. Submand	ibular Skinfol	d		•••••	5
. Bitempo	ral Fossa — Mi	nimum Frontal Arc	c - Tape and N	1arker Tool	18
. Biprozy	gomatic Mentor	Arc - Tape and I	Marker Tool 🧓		24
. Bitragi	on Minimum Fro	ontal Arc - Tape (Only		30
. Bitragi	on Faganian Ar	c - Tape Only			32
	_	ontal Arc - Tape H			31
-		c - Tape Holder .			30
_		- Spreading Calip			14
		er - Spreading Ca			13
•	-	er - Sliding Cali			11
	A CONTRACTOR OF THE STATE OF TH	- Metric Gauge			15
, •		er - Metric Gauge			14
, ,	_	er - Metric Gauge			11
	tion of Anomal	.1991	ay ang man aga nga nga aga ang ang ang ang ang a		
		ه الله عليه الله الله الله مدر الله ولي وله وله الله الله الله الله الله الله ا			
		ر 100 ما 100 م			

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A . Nam	. Name: REYNALDO TILETILE			ket No.: 2		
S/N	:		SIAN (FILIPINO	-		
1	i Assigned Ma	ask Size Category	P.F		~ ~ · · · · · · · · · · · · · · · · · ·	
MASK	Expert Fit	Alternate Size	-	Alternate		
TLC	5	M				
SCOT	т : м	5			·	
AVON U					;	
1 . Hei	ght: 166.1 cm	2. Weig	ght: 140 lts			
তৃ. Face	e Sizə Adjustab	ole Metric Template	e Circumferen:	e	<u>cm</u> 143	
4 . Sub	mandibular Skinfo	old	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	6	
5. Bit	emporal Fossa - M	Minimum Frontal Arc	= - Tape and 1	darker Tool	17.8	
á. Bip	. Biprozygumatic Menton Arc - Tape and Marker Tool 25.					
7. Bit	. Bitragion Minimum Frontal Arc - Tape Only 28.4					
8 . Bit	ragion Pogunion A	arc - Tape Only	• • • • • • • • • • • • • • • • • • • •		32.3	
9. Site	ragion Minimum Fr	rontal Arc - Tape i	Holder		30.4	
10 . Bit	ragion Pogoniem f	Arc - Tape Holder .		••••••	30.8	
11 . Biz	ygomatic Diameter	Spreading Cali	per	• • • • • • • •	13.6	
i2. Bip	rozygowatic Diame	eter - Spreading C	eliper		12.5	
13 . Men	ton-Sellion Diam-	eter - Sliding Cal:	iper		11.3	
14 . Biz	ygomatic Diameter	- Metric Gauge .	• • • • • • • • • • • • • • • • • • • •		14.5	
15 . Sip	rozygomatic Diame	eter - Metric Gaug	2		13.5	
16 Men	ton Sellion Diame	eter - Metric Gauge	2		11.6	
_	ervation of Anoma					
18 . Com	fort 0 - 5 (0	being worst case)		• • • • • • • • • • • • • • • • • • • •		

. Name: P	ARRIN KUIPERS		Subj	ect No.: 3	
		ex: M Race: W			
	Assigned Mas	k Size Categor;	PF	Values	
	! Expert Fit !	Alternate Size	Expert Fit		
ILC	i m i				
SCOTT	i M i			حيد کند سند انگ جي	
AVON US10	. S 1	M			
		2. Weig			
		e Metric Template		e	<u>cm</u> 15
. Submand:	ibular Skinfol	d		• • • • • • • • • • • •	3
. Bitempo	ral Fossa - Mi	nimum Frontal Arc	- Tape and i	Marker Tool	18
. Biprozy	gomatic Menton	Arc - Tape and N	Marker Tool	••••••	24
. Bitragi	on Minimum Fro	ntal Arc - Tape 0	Only	• • • • • • • • •	31
. Bitmagic	on Paganian Ar	c - Tape Only			20
. Bitragio	on Minimum Fro	ntal Arc - Tape H	Holder	• • • • • • • •	33.
. Bitragic	on Mag onion Ar	c - Tape Holder .			29
. Bizygoma	atic Diameter	- Spreading Calip	er evereer	• • • • • • • • •	14.
. Biprozyg	pomatic Diameto	er – Spreading Ca	diper	• • • • • • • •	13.
. Menton-9	Sellion Diamet	er - Sliding Cali	per		12.
. Bizygoma	atic Diameter	- Metric Gauge			14.
. Biprozyg	gomatic Diamete	er - Metric Gauge		*******	13.
. Menton S	Sellion Diamete	er - Metric Gauge			13
. Observat	tion of Anomal:	L e 5 I			
		نظام بالدين والجم التاليف بلطال ويون التجم التاليف بدعا والحد الحدد التاليف الحدد التاليف الحدد من الجمد الجمد والتاليف التاليف والتاليف التاليف التال			
دهای باشی واقعه الروب بیدار واقعی ایسان واقعی ایسان	a raine data soon soon pada day and may data data data da an	ne diper para man distancione, più e catte segli rella lasse cere una untre sella gilla più	مين رفيد ماي مين بطال وهم ويه. وه د با هان فعم اها ماي مايا 		
. And the state of	ar direk yang adam dipus adam mengapangan adap direk asam menan anan majar s	tid find dur dies gas des and distribute and session session and dis-	وي وي الله الله الله الله الله الله الله الل		

Α.	Name: E	RIC WHEATLEY		Subje	ect No.: 4	
	S/N:		Sex: M Race: Bl	LACK	Age:	•
+	100 ton our Tim tap and 107 was sub-	Assigned Mag	sk Size Category	PF	Values	
;	MASK	Expert Fit	Alternate Size	Expert fit	Alternate	Size
;	ILC	M	S			
	SCOTT	S	M			
;	VON US10	•	L			
1.	Height:	176.4 cm	2. Weiç	jht: 180 lbs		
3.	Face Siz	e – Adjustabl	e Metric Template	e Circumferenc	e	<u>sm</u> 153
4.	Submandi	bular Skinfol	d		• • • • • • • • •	5
ទ .	Bitempor	al Fossa - Mi	nimum Frontal Arc	- Tape and 1	Marker Tool	18.3
6.	Biprozyg	jomatic Menton	Arc - Tape and N	Marker Tool		25.5
7.	. Bitragion Minimum Frontal Arc - Tape Only 30.					
з.	Bitragic	on Paganian Ar	c - Tape Only		• • • • • • • • • • • • • • • • • • • •	31.5
9.	Bitragic	on Minimum Fro	intal Arc - Tape H	Holder		32.3
10 .	Bitragio	n Pogonion Ar	c - Tape Holder .		• • • • • • • • •	30.1
11.	Bizygoma	atic Diameter	- Spreading Calip	er		14.2
12 .	Biprozyg	omatic Diamet	er - Spreading Ca	diper		13,3
13.	Menton-S	Sellion Diamet	er - Sliding Cali	per	• • • • • • • •	12.2
14.	Bizygoma	tic Diameter	Metric Gauge			13.6
13.	Biprozyg	pomatic Diamet	er - Metric Gauge			13.4
16.	Menton S	Sellion Diamet	er - Metric Gauge		• • • • • • • • •	12.5
17.		ion of Anomal				
	en der eine san den den eine and - ei	s agus alles selles anné millé thoir puig laira, malé abus, duré vesti se a	منط عليه عليه وهو يوم يوم وهو الله الله الله الله الله الله الله	. anga kyal alifu yang silika daga yang santa daga sang sang daga aran	Fig. 400 at 100 top 400 to ap	
			and yet dign . It dilts o a distriction is a sea only unit price for your bits one out only now only			
18.	Comfort	0 - 5 (0 b	eing worst case)	• • • • • • • • • • •		

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A	•	Name: Ci	HARLES PROUTY		ورطينا	ect No.: 5	
		3/N:		Sex: M Race: W	HITE	Age: 18	}
+			Assigned Na	sk Size Category	PE	Values	·
:		MASK	Expert Fit	Alternate Size	•	Alternaté	Size
:		ILC	S	H	·		
:		SCO1T	S	М		!	
:	AV	ON US10	S	М			
1	•	Height:	178.7 cm	2. Weig	jht: 164 lcs		
3	•	Face Siz	e – Adjustab	le Metric Template	e Circumferen	ce	<u>ca</u> 144
4	•	Submandi	ibular Skinfo	id	• • • • • • • • • • •	•••••	3.5
5	•	Bitespor	ral Fossa - M	inimum Frental Arc	- Tape and i	Marker Tuol	17.3
ó	•	Biprozyg	pomatic Mento	n Arc - Tape and 1	herker Togl	•••••	24.1
7	•	Bitragio	an Minimu≤ Fro	ontal Arc - Tape (Only	4:	28.8
8	•	Bitragio	n Pogonian A	c - Tape Only	• • • • • • • • • • • • •	••••••	30.5
7	•	Bitragio	on Miniawa Fro	antal Arc - Tage :	∹oider	••••••	31.s
O	•	Bitragio	on Pogenion A	rc - Tape Holder .	•••••••	••••••	29.¢
1	•	Bizygema	etic Diameter	- Spreading Calip	oer	• • • • • • • • • • • • •	13.4
3	-	Biprozyg	gematic Diame	ter - Spreading Ca	aliper	••••••	12.1
3	•	Henton-S	Selly <i>a</i> n Diame	ter - Sliding Cali	ip er	• • • • • • • • • •	11.2
4	•	Bizygoma	tic Diameter	- Metric Gauge	• • • • • • • • • • • •	••••••	13.6
5	-	Biprozyg	pomatic Diame:	ter - Metric Gauge	2	• • • • • • • • • •	12.5
iė	•	Menton S	Sellion Diame	ter - Metric Gauge	2	• • • • • • • • •	11.7
7	•		ion of Ancea				
18		Confort	0 - 5 (0)	peing worst case)			_

A .	Name: Di	erel scales		Subje	ect No.: &	
	3/N:		Sex: M. Race: B	LACK	fige: 24)
4 ~		Assigned Ma	sk Size Category		Values	·
:	MASK	Expert Fit	Alternat# Size	Expert Fit	=	Gize
;	ILC	M	L			**************************************
:	SCOTT	M	ξ			-
AV	ON US10	₹'	L			
1 .	Height:	187.4 cm	2. Wei	ght: 178 ibs	الله الله الله الله الله الله الله الله	SE
3 _. .	Face Sia	ze – Adjustabi	le Metric Tempiat	# Circusteress	e	इसेड
4 .	Submandi	ibular Skinfo	ld	• (¶	*****	3
5.	Bitempa	ral Fossa - M	inimum Frantsi Ar	ह न हिंदुके अंतर्थ है	Sanker Tool	19
ģ.	Rierczy	gomatic Mento	n Arc – Tepe and I	Merker Tool	********	26. ?
7.	Bitragio	on Minimum Fr	ontal Arc - Taps	Miy ,,,	r486434384	27.2
8.	Bitragio	on Pagarion A	rc — Tape Only		: > 2 4 2 4 7 8 7 2 2	35.2
9.	Citragio	on Minimum Fro	ontal Arc - Tape	Helder	**********	72
ιο.	Ritragio	on Pegorion A	rc – Tape Hoid er	••••		32,4
įi.	Bizygom	atic Diameter	- Spreading Cali	per	•••••	14.7
17 .	Biprozy	gematic Diame	ter - Spreading D	aliper	• • • • • • • • • • • • • • • • • • • •	13.5
:3.	Menton-	Sellion Diame	ter - Sliding Cal	ip er	•••••	13.3
i∂.	Eizygom	atic Dia sc te-	- Metric Gauge .	•••••	••••••	14.8
15.	Biprozyo	gomatic Diame	ter - Metric Gaug	e	••••	14
is .	Menton !	Sellion Diame	ter – Metric Gaug	e	• • • • • • • • • • •	13.1
17.		tion of Ans m a				
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
18.			heing worst case)			<b>-</b>

<u>A</u> .	Name: J	OHN HATTS			Subje	ect No.: 7	
	S/N:	<del></del>	Sex: M	Race: W	HITE	Age:	
**************************************	·	Assigned Ma	sk Size	Category	i pf	Values	<del></del>
:	MASK	Expert Fit	: Altern	ate Size	Expert Fit	Alternate	Size
:	ILC	S	:	н	:		
	SCOTT	i ri		S			
AV	oteu nev	: S	1	М			
i.	_	173.5 cm ze – Adjustal			ght: 180 lbs e Circu <del>a</del> fer <b>e</b> n		<u>ca</u> 150
4	Submand	isular Skinfo	old		••••••	• • • • • • • • •	5
5.	Bitempo	ral Fossa - !	Minieua F	Frental Ar	c - Tape and	Marker (Go)	16.£
ę.	Ŗįprozy	gomatic Mente	on Arc -	Tape and	Marker Tool .	• • • • • • • • • • • • • • • • • • • •	26. 1
7 ,	B, tr≥qi	on Minimum Fi	rontal Ar	-c - Tape	©nly		29.7
e .	Ritragi	on Pagantan i	Arc - Tap	oe Coly			32.3
9.	Bitragi	on Minimus Fo	rontal Ar	rc - Tape	∺older		32.5
ι÷ .	Fitragi	en Pegenien (	Arc - Tap	oe Held <del>e</del> r			31.5
ł1 .	Bi - ygos	atic Diamete	r - Spre	adirg Cali	per		14
: Z .	Biprozv	grastic Diem	ster – Sp	oreading C	aliper		12.9
13.	Menton-	Sellion Piac	eter - Si	liding Cal	iper	•••••	12.1
14 .	8) zygos	atic Diamete	r - Metri	ıc Gauçe .	••••••	••••••	14.5
15 .	Biprozy	cometic Diam	eter - M	etric Gaug	}e	•••••	13.6
ió .	Menton	Sellion Diam	eter - 4	etric 6aug	is	••••••	12.5
17.	-						
18.					••••••		

		•					
	S/N:		Séx: Ħ	Race: B	LACK	Age: 18	3
~~		Assigned Ma	sk Size	Category	!	Values	
-	MASN				Expert Fit		Siz
	ILC		! !	M			
	SCOTT	-	z	L			
AV	ดม บราจ	L	* * * * * * * * * * * * * * * * * * *	М	1		
	Height:	185.4 cm		2. Weig	ght: 213 lbs		
•	Face Siz	e – Adjustab	le Metri	c Template	e Circumf <b>e</b> ren:	ce	14
-	Submandi	ibular Skinfo	ld	•••••	••••••		3
•	Bitempor	ral Fossa - M	inimum F	rontal Arc	c - Yape and I	Marker Tool	18
•	Biprozvo	gomatic Mento	n Arc -	Tape and !	Marker Tool	•••••	26
•	<u> Bitragi</u>	on Miniawa Fra	cotal Ar	c - Tape (	Only	• • • • • • • • •	29
•	Bitragio	on Paganien 4	rc - Tap	e Only	• • • • • • • • • • •	• • • • • • • • •	32
-	Bitragio	on Minimum Fr	ental Ar	c - Tape i	Holder		32
-	Bi tragiq	n Pegonien A	rc - Tap	e Holder .	• • • • • • • • • • • • •	••••••	20
•	Bi zygoca	atic Diameter	- Sprea	dıng Calı	per	••••••	13
-	Biprosyg	go≈atic Diame	ter - Sp	reading C	aliper	• • • • • • • • •	13
-	ĕenton∹	Sellion Diame	ter - Sl	iding Cal	iper		12
-	Bi⊃ygona	atic Dia <b>se</b> ter	- Metri	c Gauge	•••••	• • • • • • • • •	14
•	Bipropy	genatic Diame	ter - Me	tric Gauge	È		13
	Mentan S	Sellion Disce	ter - Me	tric Gauge	2	• • • • • • • • • •	12
•		tion of Anoma	•				

Ā	er La •	Name: Ki	evin <del>K</del> alker			Subje	ect No.: 9	
 		S/N:		Sex: M	Ráce: B	LACK	Age: 19	7
+			Assigned Ma	sk Size	Category	: PF	Values	
: :		MASK	Expert Fit	: Altern	ate Size	Expert Fit	Alternate	Size
. 1	-	ILŜ	*		S			
		SCOTT	ri .		L			
3	Áυ	ON US10	M	;	L	;		
1	•	Height:	175.3 cm		2. Wai	ght: 172 lbs		
3	٠.	Face Siz	e – Adjustab	le Metri	c Templat	e Circumferens	:e	<u>ca</u> 160
4		Submandi	bular Skinfo	ld	• • • • • • • •	•••••	••••••	5
5	•	Bitempor	ai Foss≩ - M	inioum F	rental Ar	c - Tape and !	Marker Tool	19.2
á	•	Biprozyg	cestic <b>Ke</b> nto	១ អា⊂ – ់	Tape and	Marker Tool	••••••	25.3
7	- •	Bitragio	m Hinlaum Fr	ontal Ar	c - Tape	Only		29.5
8	•	Bitragio	n Pagenion A	rc - Tap	e Only	••••••	• • • • • • • • •	32.6
9	•	Bitragio	n Minimus Fr	ontal Ar	c - Tape	Holder	• • • • • • • • • •	31.9
10	•	Bitragio	m Fogshien A	rc – Tap	e Holder	•••••••	••••••	31
11	-	Bizygoes	itic Diameter	- Sprea	ding Calı	per	• • • • • • • • • • •	14.5
12	-	Biprozyg	pomatic Diame	ter – Spi	reading C	aiiper	• • • • • • • • •	13.5
13	-	Menton-S	<b>e</b> llion Diase	ter - Sl	ıding Cal	iper		12.;
14	*	Birygeas	itic Diameter	- Metri	c Gauge .	• • • • • • • • • • • • •		15.2
15	•	Piprozyg	pomatic Diame	ter - He	tric Gaug	e <i>-</i>	••••••	14
16	•	Menton S	Sellion Diame	ier - Me	tric Saug	2		12.3
17	•		ion of Anoma					
18	•	Confect	0 - 5 (0)					

Ĥ	<b>2</b> .	Hames Ri	APHAEL MONEI	L-		Subje	ect Ne.: 10	<b>,</b>
		5/N:		Sex: M	Race: B	LACK	Age: 19	<b>&gt;</b>
+			Assigned Ma	ask Size		PF		
:		MASK	Expert Fit	! Aitern		Expert Fit	-	Size
:		ILC	S	: :	ĸ			
:		SCOTT	S	!	Ħ		A. Se og over	
:	AV	ON USIO	5	•	<b>!</b> 4	•		
1	•	Height:	154.6 cm		2. Wei	ght: 158 lbs		
3	•	Face Siz	ze – Adjustal	dia Metri	c Template	e Gircumferen	CE	<u>CB</u> 145
4	•	Submandi	ibular Skinfo	old		•••••		5
5	-	Biteapor	ral Fossa - !	Miniœum F	rontal Ar	c - Tage and I	Marker Tool	18
ó	•	Siprozy	gomatic Ment	०० भेटर -	Tape and i	Marker Tool	•••••	24.2
7	•	Bitragio	on Minimum Fo	rentel Ar	c - Iake	Galy	••••	29.6
8		Bitragio	on Paganian (	Arc - Tag	e Balv		•••••	29.9
9	•	Bitragio	co Miniaca F	rontal Ar	is - isse :	Kolder	•••••	32.5
16	•	Bitragie	en Pegonion (	Àrc - Tạp	e Holder		4.,,	29.8
11	ı	9i zygca:	atic Dia <b>mete</b>	r - Spræ	eding Cali	øer	• • • • • • • • • • • • • • • • • • • •	13.2
12	: -	Biprozy	gomatic Diam	eter - Sp	oreading C	allper	•••••	11.9
13	•	ilenton-	Sellica Diam	eter - S!	:ding Ca)	iger	: 3 + 4 + + ; . + 3 +	12
:4	•	Bizygom	atic Di <del>sset</del> e	r - Metri	c Bauge .	********	• • • • • • • • •	13.7
13		Biprozy	gomatic Diam	eter – Me	etric Gaug	e	• • • • • • • • • •	12.9
16	-	Menton !	Sellion Dia <del>s</del>	eter - Me	etric Saug	9	••••••	12.3
17	•	_	tion of Anom					
18		Confort	0 - 5 (0	being wo	orst case)	•••••		

 А.	A . Name: JEFFERY JOHNSON Subject No.: 11									
	S/N:		Sexs #	Race: B	LACK	Age: 19	•			
+		Assigned Ma	sk Size	Category	FF	Values				
:	MASY.	Expert Fit	! Altern	ate Size	Expert Fit	Alternate	Size			
:	ILC		?	S	;					
:	SCOTT	M	:	3		;				
: A	VCN US10	М	: : :	5		:				
1.	. Height: 157.4 ca 2 . Weight: 154 lbs									
з.	Face Siz	re – Adjystab	le Netri	c Templat	e Circumferen	ce	119			
4.	Subaandi	ibwlar Skinfo	ld		: • - · · · · · · · ·		5			
5.	. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 18									
é:	. Biprozygomatic Menton Arc - Tape and Marker Tool 23									
7.	Bitragia	or Miniaus Fr	ontal Ar	c - Tape	Ois	• • • • • • • • •	29.2			
٤,	Ritragio	on Pegenion A	rc - Tap	e Galy		• • • • • • • • • •	31.1			
7.	Bitragio	en Miniaua Fr	ontal Ar	rc - Tapa	Holder		\$1.7			
10.	Sitragio	on Pagenien A	rc - Tap	∈ Holder	,		30			
ijį.	Brzydes	atıc D:ameter	· Sprea	iding Cali	per		14.2			
12.	Biproty	jomatic Diame	ter - Sp	reading C	eliper	********	12.5			
:3.	Henton-9	Sellion Diame	eter - Sl	iding Cal	iper	• • • • • • • • •	11.2			
14.	Bizygona	atic Diameter	- Metri	c Gauge .	• • • • • • • • • • • • • •		:4.5			
15 .	Siproze	gomatic Diage	iter - Me	etr:c Gaug	٠.,,,,,	,	12.9			
16.	Menton :	Sellion Siame	iter - Me	etric Saug	e		12.3			
17.	นีซร <del>ย</del> างอ	tion of Angma	lies:							
					های به در میباشد. برید دار این شو ۳۰ شاه بیداند . که برد دیا جدادی و ۲۰ که اندیسیات بیداند کند.					
18.	Coafert	6 - 5 (0	being ac	erst case	•••••					

Ą	-	Nessi U	LOYD BELLARD			Suo	ject Md.: 1	12
		S/##					Age: 1	9
:		-	Assigned Ma					
:		Keek	Expert Fit	: Altern	ate Size	: Søgert fit	: Alternate	÷ Si≈F
7			L	:		;		-
•			M	•	L			
			<u> </u>	:	Ħ			<b>-</b>
			192.3 cm					
3	•	Face Siz	e - Adjustab	le Metri	c Tamplai	ie Circumfere	nce	<u>çe</u> , <u>177</u>
4	•	Subasndi	ibular Skinfo	ld	• • • • • • • •			. 7
5	•	Bi teapor	rai Fossa - M	int <del>s</del> va F	rontal Ar	c - Tape aud	Marker Tool	17.3
¢	•	Biorszyg	gamatic Mento	n Ārs —	Tape and	Marker Tool	*******	. 27
3	-	3: tragic	on Hinsaud Fr	antal Ar	c - Tape	Only		. 30
S		Bitragio	an Pagantan A	rs - Tap	e Only			34.2
3	•	Bitrage	an Miniswa Fr	ontal Ar	c ~ Yape	Holder		. 33.2
; ≎	•	Bitregis	in Poganian A	rc - Tag	e Holder		)>+6++-	32.7
11	-	Bi zygosa	atic Diameter	- Spres	ding Calı	per		14.2
12	-	Eiprozyg	goatic Diame	ter – Sa	reading (	Caliper		13.1
13	•	Menton-9	Sellion Diams	ter - 31	ıdıng Cəl	19 <del>2</del>		. 17.5
14	•	ซีเฉพ <b>g</b> oma	atic Diameter	- Metri	c Gauge .		,	. 14."
15	•	Biprosyg	gosatio Dieme	ter - Me	itric Gaug	je		. 13.4
16	-	Menton S	Bellich Blace	ter - Me	tric Gauç	e		. 13
17	-		tion of Anoma					
					,			
10			0 - S : 6					

-				•					
A	. Name: R	ODNEY L. OWIN	<b>6</b> 5	Subji	est No.: 13	3			
	S/N:		Sex: M Raçê: W	HITE	Age: 19	7			
÷~-		Assigned Ma	sk Šize Category	PF	Values	 :			
:	MASK	Expert Fit	: Alternate Size	Expert Sit	Alternate	Size			
!	ILC	S	: M			: :			
:-	SCOTT N L								
;-	AVON US10	•	[		*	: :			
1	. Height:	169.5 cm		ght: 144 lbs					
3	. Face Siz	e - Adjustab	le Metric (emplate	2 Circumferend	e ,	<u>ca</u> 162			
4	. Submandi	ibular Skinfo	lo	• • • • • • • • • • • • • • • • • • • •	•••••	5			
5	" Bitemper	ral Fossa - R	inimum Frantai Are	= Tage and t	iarker Tool	18.4			
. <i>&amp;</i>	. Biprozyg	jomațic Mento	n Ars — Tape and :	larker iggl		26.3			
7	. Pitragia	ə Miaimum Pr	ontai Arc - Tage (	ગોષ્ટ્ર ,	•••••	28.8			
8	. Bitragio	in Pegonien A	rs - Tape Coly			33.3			
7	. Bitr∌gic	on Minimum Pri	mptal Arc - Tape l	kider		31.7			
10	. Bitragic	n Fogonion A	rc – Tape Holder .	•••••••	·	32.8			
11 .	. Bizyeoma	itic Diameter	- Spresding Calif	pr		14			
12 .	. Piprozyg	ponatic Diame	ter – Spresijing Ca	eliper	•••••	12.8			
13.	. Menton-3	Sellion Diame	ter - Sliding Cali	pa		12.3			
14 .	. Bicygoma	tic Diameter	- Matric Gwlge	······································	•••••	14			
15 .	. Biprozyg	pomatic Diame	ter - Metric Gauge	·	*******	13.3			
is .	. Mentan S	ellion Diamed	ter - Metric Saugs	· · · · · · · · · · · · · · · · · · ·	******	12.8			
17 .		tion of Angsal							
	~								
				· · · · · · · · · · · · · · · · · · ·					
18 .	. Seafort	0 - 5 (0)	elng worst case)	•••••	•••				

#### COTO/INFORMATION FORM TESTING AT CODE SEZE DETERMINATION XM4C MASK

A	•	Name: J	ERRY JOHNSON				وز طناS	ect No.:	14
		s/n:		Sex: M				Aget	19
÷		· · · · · · · · · · · · · · · · · · ·	: Assigned Ma			·	FF	Vaiues	
:		MASK	Expert Fit	: Altern	ate Size	•		Alternat	te Size
;		ILC	S		М	:	_		
		SCOTT	S	:	м		-		
:	AV	ON US10	M	:	S		_		
1	•	Height:	172.7 cm		2 . We	eight: 150	lbs		
3		Face Siz	e – Adjustab	le Metri	c Templa	ite Circumf	erend	:e	136
4	•	Sebaandi	ibular Skinfo	id	•••••	7.44	• • • •	• • • • • • • • •	. 4
5	•	Bitempor	ral Fossa - M	iniaum F	rontal f	Arc - Tape	and h	Marker Too	oi 17.9
é	•	Biprozyg	gomațis Mento	n Arc - '	Tape and	l Marker To	oì		25.4
7	•	Bitragio	on Mirinum Fr	ontal Ar	с — Таре	Only	••••		29-6
3	•	Bitragio	on Peganier A	rs - Tap	e Only .		••••	••••	Ji,9
ç	•	Sitregio	on Minimum Fr	ontal Ar	c - Tape	Holder	• • • • •		31.3
10	-	Bit-agio	an Pogoniem A	rc - Tap	e Holder	• ••••••		,	30.3
11	•	Bizygoa	atic Di <b>&gt;xete</b> r	- Sprea	ding Cal	iper			14.3
12	-	Biprozyg	pomatic Diane	ter - Sp	readirq	Caliper	· • · · ·		13.1
13	•	Menton-S	Sellion Dia <del>m</del> e	ter - 51	iding Ça	diper	••••		i2
14	•	Bizygoma	atic Dia <b>me</b> ter	- Metri	c ganda	•••••	~ • • • •		14.6
15	•	Siprozvo	pomatic Diame	ter - Ke	tric Gau	:çe	••••		13.5
15	-	Menton 9	Sellion Diame	ter ·· Ke	triz Sæ	ige	••••		12.2
17	-		tion of Andma						
18	•		0 - 5 - 6	~					

A		Name: RC	DBÉRT LINDEMO	EN	Subje	ect No.: 15	5				
.* 	*	S/N:		Sex: M Race: W	HITE	Age: 19	7				
•	<u></u>	<del> </del>	* *	sk Size Category							
• •	. Î	MASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size				
	=	ILC M		8							
i:	=	SCOTT	M	S		: :					
	ĀVĒN US10 : M ; S ; ;										
ं i		Height:	181.4 cm	2. Wei	ght: 206 lbs		Ŷ				
3	•	Face Siz	:e - Adjustabi	le Metric Templat	e Circuaferen	ce	<u>cm</u> 148				
4	•	Submandi	bular Skinfo	ld	•••••		6				
5	•	. Bitemporal Fossa - Minimum Frental Arc - Tape and Marker Tool 18.									
ċ		Biprozyg	omatic Mento	n Arc - Tage and !	Marker Tool ,		26.8				
7	-	Bitragi:	on Miniawa Fe	ental Arc - Tape	Only	•	29.7				
9	•	Butragio	on Pegenier Ar	rc - Tape Only	•••••		34				
7	•	Eitragio	on Minieum Fra	ental Arc - Tape	Holder		31				
10		Bitragio	an Paganian A	rc - Tape Holder	*****	• • • • • • • • • • • • • • • • • • • •	72;9				
<u>.</u> :	•	Bi zygom	stic Dismeter	- Spreading Cali	per		:4.6				
12	•	Bierosy	gomatic Diame	ter - Spreading C	aliper		13.8				
<u> </u>	•	Menton-S	Sellion Diame	ter - Sliding Cal	iper	* • • • • • • • •	12.4				
14		Bizygom	atic Diameter	- Metric Gauge .	* * * * * * * * * * * * * * * * * * * *	• • • • • • • • • •	15.4				
15	•	Biprozy	gomatic Diame	ter - Metric Gaug	e		14.3				
16		Menton 9	Sellion Diame	ter - Metric Saug	2	••••••	12,2				
17	•		tion of Anoma								
	•	~									
						***					
18	•	Confort	0 - 5 (0)	being worst case)	•••••	••••••					

Á		Name: J	MES D. HÖFT			Subje	ect No.: I	<del>á</del>
د اسامره آ بسر		S/N: =		Sex: M	Race: W	HITE	Age: 2	2
4	نيت	<u> </u>	-Assigned Ma	ask Size	Category	: FF	Values	
1	-	MASK	Expert Fit		ate Size	Expert Fit	Alternate	Size
		ILC	S	-;	**************************************			
•		SCOTT		;	L			·
		ON USIO		.1	Ł	:		
	. ~	Height:		-	·2 . Wei	ght: i80 lbs e Circumferen	:e	<u>ca</u> 168
-						•••••		
5	 Æ	, į	_			c - Tape and I		
•						Marker Tool		
-						Only		
ż		Ditregio	n Paganian A	<del>i</del> rc – Tap	e Only			33.2
ş		Bitragio	an Minimum Fo	renžal Ar	c - Teps	Holder		32.2
10	-	Sitragio	m Pagamien i	Arc - Tap	e Holder	•••••		31.2
įį		Bizygoma	ıtic Diameter	r - Sprea	ding Cali	oer		14.4
12	₹	Bibceska	cometic Diam	eter - Sp	reading C	aliper		13.3
13	•	Menton-9	Sellion Diam	eter – Bi	iding Cal	iper	• • • • • • • • •	12.3
<u>5</u> .4	•	Elzygoni	atic Diamete	r - Metri	c Gaug <b>e</b> .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	14.7
15	•	tiprozyg	pomatic Diam	et <b>er -</b> Me	etric 6. q	e		13.9
ŧó	4	Mentes (	Rellion Glamm	eter – Me	etric <del>G</del> aug	e		12.7
<b>1</b> 7	•		tien of Anom					
			· · · · · · · · · · · · · · · · · · ·					
18	÷			-		••••••	-	

	A Nade: J	AMES HILGEDIC	٠		چښې	gat-Noj: 17	<u>.</u>
	5/N:		5 <b>9</b> x s. • M:	Rače: M	HITE -	_ Age: 18	<b>3</b> .
		l Assigned Mas	sk Size	Sategory	PF	Values	وني پيند ا
	MASK	Expert Fit	Altern	ate Size	Expert Fit	Alternate	Size
	ÎLC	S		M			
	SCOTT	. M		5			
	O12U NCVA	. M		Š			· <del>*****</del> **
 	. Height:	174.6 cm		2. Wei	ht: 181 lbs		-
		ze – Adjustabi	le Metri	-			<u>ce</u> 147
<u>.</u>	₩	ibular Skinfol			,	•	. <b>9</b>
		ral Fossa - Mi				• • • •	19.1
	•	gómatic Mentor					25.7
7	•	on Minimum Fro			_	-	30.7
Ş	3 - Bitragi	on Poganien Ar	rs - Tap	e Only	*********		32.5
. •	? - Bitragi	on Mini <b>aua F</b> re	ontal Ar	c - Tape i	Haide	•••••	32.5
ì	Q . Bitragi	en Pegenion Ar	rc - Tag	e Holder .	••••••	•••	31.4
1:	. Biżygom	atic Diameter	- gibles	ding Cali	ier	• 6 4 4 • • • • • •	14
13	2. Biprozy	gematic Diame!	ter - Sp	readiny C	aliper		12.5
13	3. Menton-	Sellion Diame!	ter - 51	ioiņģ Cal:	ipar		12.2
1.4	ł. Ėizygom	atic Diameter	- Metr:	c Bauge			14.3
15	5. Biprozy	gomatis Diame	ter - Me	etric Gaug	=	••••••	12.6
14	6 - Menton 9	Sellion Viame!	ter – Me	itric Gaug	• ••••	• • • • • • • • • •	12.5
17		tion of Anomal					
						معادلين المام مي ويوم المام الم	
18	Go⊅fort	0-9 (0)	peing wo	rst case)		•••••	

·• • • • • • • • • • • • • • • • • • •	( <b>•</b> )	S/N:	THONY HOLFE	Sex: H Race: W		ect No.: 1 Age: 2	
4.	. •ر.			Jex. 17 nace. m		nye. r	ب 
्ड. • •	,	•	Assigned: Ma	ek Size Category	PF	Values	
		MASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size
:		ILC	М	L			
:		SCCTT	Ħ	S			**************************************
	AV	ON US10	- H	Ĺ			
1	.•	Height:	193.2 cm	2. Weig	ght: 149 lbs		- 1, 
3	•	Face Siz	e – Adjustab	l <b>e M</b> etric T <b>em</b> plato	e Circuaférén	ce	<u>CO</u> 144
.4	•	Submandi	bular Skinfo	id	• • • • • • • • • • •		3
5	•	Bitempor	'al Fossa - M	inimum Frontal Arc	c - Tape and I	Marker Tóol	18.3
č	>	Biprozyg	pomatic Mento	n Arc - Tape and I	Marker Tool		25. i
7	•	Bitragio	on Minimum Fr	ontal Arc - Tape (	Doly		27.8
8	•	Bitragio	n Pegonien A	rc - Tape Only	• • • • • • • • • • • • •	•••••	31.7
Ġ	•	Bitragio	n Minimum Fr	ontal Arc - Tape i	Holder	•••••	36.1
10	•	Bitragio	on Paganian A	rc - Tape Hoider .	•••••	•••••	30.2
11	•	Bizygoma	atic Diameter	- Spreading Cali	per		13.2
12	•	Bierozyg	pomatic Diame	ter - Spreading C	aliper	•••••	12
13	•	Menton-S	Sellion Diame	ter - Sliding Cal	iper	******	12.3
i4	•	Bizygoma	atic Di <b>ame</b> ter	- Metric Gauge .	•••••		13.5
15	•	Siprezyo	gomatic Diame	ter - Metric Gaug	e		12.2
èi	•	Mentan 9	Sellion Diame	ter - Metric Gaug	e	• • • • • • • • • •	13.2
17		VERY LONE	tion of Anoma NARRGW FACE				
			· · · · · · · · · · · · · · · · · · ·				
18	•			being worst case)			

A	•	Name: w	ILLIAM PENNEY		Subje	ect No.: 19	•
		S/N:	<del></del>	Sex: M Race: Wi	HITE	Age: 22	•
+- :			Assigned Ma	sk Size Category	PF	Values	
:		MASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size
:		ILC	M	S			
:		SCOTT	M	: S	;	;	
:-			M	 L			
:		Height:	173.2 cm	2 . Wei	ght: 183 lbs		
3	•	Face Si:	ze - Adjustab	le Metric Template	= Circumferen	ce	<u>==</u> 144
4	-	Subaandi	ibular Skinfo	id	• • • • • • • • • • • •	•••••	8
5		Bitempor	ral Fossa - M	inimum Frontal Ar	c - Tape and l	Marker Tool	17.8
ó	-	Biprozy	gomatic Mento	n Arc - Tape and i	Marker Tool	• • • • • • • • • • • • • • • • • • • •	25.5
7		Bitragia	on Minieum Fr	ontal Arc - Tape	Only	• • • • • • • • • •	29.8
9	-	Bitragio	en Pogenien A	rs - Tape Only		• • • • • • • • •	33.2
à		Bitragia	on Minimum Fr	ontal Arc - Tapa :	Holder	• • • • • • • • • • • • • • • • • • • •	31.9
10	•	Titrage	on Pegenien A	rc - Tape Holder	• • • • • • • • • • • •		31.9
<b>i</b> 1	•	Bizygon	etic Diameter	- Spreading Cali	per		14.7
12		Biprezy	gosat:c 0:ame	ter - Spreading C	aliper	••••••	13.1
13		Menton-	Sellion Diame	ter - Sliding Cai	iper	•••••	12.1
12	•	Bizygosa	etic Diameter	- Metric Bauge .	••••••	,	15
15	-	Biprozy	grmatic Diame	ter - Metric Gaug	g	,	13.5
16	-	Menton :	del'ion Diane	ter - Metric Saug	e	•••••	12.6
17			tien of Andma				
18	•			being werst case)			

205

Marie State of the second seco

A	•	Name: Jl	JAN CRUZ			Subje	ect No.: 20	<b>)</b>
		S/N:		Sex: M	Rate: S	PANISH	Age: 21	i
+			Assigned Ma	sk Size (	Category	PF	Válues	
:		MASK :	Expert Fit	: Alterna	ate Size	Expert Fit	Alternate	Size
:		ILC	L L		М	:		
;		SCOTT	L	·	М			
•	AV	'01 US10	L	1	M	!		
1	•	Height:	182.7 cm		2. Wei	ght: 215 lbs		
3	•	Face Sta	e - Adjustab	le Metric	: Templat	e Circueteren	c <b>e</b>	<u>Cm</u> 164
4	•	Submandi	ibular Skinfo	ld	• • • • • • • • •	• • • • • • • • • • • • •	•••••	6
5	. Bitemporal Fessa - Minimum Frontal Arc - Tape and Marker Tool 18.9							18.9
÷	•	. Biprozygomatic Menton Arc - Tape and Marker Tool 26.3						
7	•	Bitragio	on Minimum Fr	ontal Arc	- Tape	Only		30.8
3	-	Bitragio	on Pogenien A	rc - Tape	e Caly	• • • • • • • • • • •	*******	35
⋾		Bitragia	on Miniava Fr	ontal Arc	- Tage	Holder	•	32.9
10	-	Sitragio	on Pagantan A	rc - Tape	e Holder			\$3. I
11	-	Brzygoa	atic Diameter	- Spread	ding Calı	per		15
12	•	Biprezyg	gematir Diame	ter - Spr	reading C	aliper		13.7
15	•	Menton-9	Sellion Diame	ter - 51:	iding Cal	iper	•••••	12.5
14	•	Bizygona	atic Diameter	- Netri	: Gauge .	• • • • • • • • • • • • • • • • • • • •		15
15	•	. Biprozygomatic Diameter - Metric Bauge						
iò	•	Menton 9	Sellion Diame	ter - Kei	tric Gaug	9	• • • • • • • • • • •	13.2
17	•		tion of Ancama					
18		Confort	0 - 5 (0 :	seing se	rst case)			

A	•	Name: Si	ARY TILMAN			Sub j	est No.: 2	1
		S/N:		Sex: M	Race: 8	LACK	Age: 1	ទ
*			Assigned Ma	sk Size	Category	: ?F		
# 2 1		MASK	•	: Altern	ate Size	Expert Fit	: Aiternate	Size
•		JLC	<u>د</u>	:	# <del>*</del>		:	
:		SCOTT	M	:	L	,	:	
:	A	/DN US10	-	:	it	:		
		_	181.4 ∈æ			ght: 195 lbs		<u>ca</u>
	•					e Circum ^f eren		
	•							
	•					c - Tape and I		
۴	•	Biprozyg	iomatic Mento	n Arc - '	Tape and I	Marker Tool .	• , • • • • • • • •	28
7	•	Bitragio	on Minimum Fr	ontal Ar	c - Tage	Only	• • • • • • • • • • • • • • • • • • • •	31.1
3	•	Bitragio	en Piganien A	krc – Tap	e Caly	• • • • • • • • • • • • • • • • • • • •	••••••	34.6
9	•	Bitmagia	on Miniawa Fr	ontal Ar	c - Tape	Helder	• • • • • • • • • •	32.7
10	•	Sitragio	r Pegenien A	irc - Tap	e Holder	••••••	• • • • • • • • • •	73.4
ı.	•	Bizygene	atic Dieceter	- Spree	dıng Cali	per	• • • • • • • • • • • • • • • • • • • •	13.9
12	•	Biprezyo	pomatic Diame	eter - Sp	reading C	aliper	• • • • • • • • • • •	13.5
13	•	Menton-S	Sellion Diame	eter - Sl	ıdırg Cal	iper	• • • • • • • • • •	12.1
4	•	Braycone	etic Diameter	- Metri	c Gauge .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	14.4
15	•	Brbcoská	pomatic Diame	iter - He	trıc Gaug	e	• • • • • • • • • • •	13.9
ić		Menton 9	e:1;an Diase	ter - Me	tric Gaug	e	• • • • • • • • • • • • • • • • • • • •	12.8
;			iion of An <b>o</b> ma					
18	•					•••••		

A	•	Name: Ji	AMES VOLER			Subje	ect No.: 22	2
		5/N:	<del></del> (	Sex: M	Race: W	HITE	Age:	-
÷			Assigned Ma	sk Size (	Category	; pf	Values	
:		MASK	Expert fit	Altern	ate Size	Expert Fit	Alternate	Size
:		ILC	S	:	н			
:		SCOTT	8	: :	М		:	
;	AV	ON US10	•	: :	S			
:		-	175.2 cm			ght: 198 lbs		<u>C.a.</u>
3	-				-	e Circumferen		137
4	•	Submandi	ibular Skinfo	ld	• • • • • • • •	• • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	6
5	•	Bi tempa	ral Fossa - M	iniaum F	rontal Ar	c - Tage and I	Marker Tool	17.9
ć	•	Biprozvo	gomatic Mento	n Arc - 1	Tape and i	Marker Tool .		24.8
7	•	Sitragio	en Miniawa Fr	ental Ar	c - Tape	Only		28.5
9	•	Bitragio	en Paganian A	rc - Tap	e Goly	• • • • • • • • • • •	• • • • • • • • •	32
?	•	8itrəgi:	on Miniawa Fr	ontal Ar	c - Tape	Holder		30.3
10	-	Bitragio	on Pogonion A	rc – Tapi	e Holder	••••••	• • • • • • • • • •	31
11	•	Bitygen	atic Diameter	- Sprea	ding Cali	per		14
12	•	Biprosy	gomatic Diame	ter - Sp	reading C	aliper	• • • • • • • • • • • • • • • • • • • •	12.6
13	•	Menton-	Sellion Diame	ter - Sì	iding Cal	iper	• • • • • • • •	11.7
14	-	Bizygom	atic Diameter	- Metri	s gande .	• • • • • • • • • • • • • • • • • • • •	•••••	14
15		Biprocy	gomatic Diame	ter - Me	tric Gaug	e	• • • • • • • • • • • • • • • • • • • •	13
16	• •	Menton :	Sellion Diame	ter - Me	trıc Saug	e	•••••	12.1
17	· <u>-</u>		tion of Anoma					
18	; .							

A	•	Name: R	ICHARD CAMPE	ELL ·		Subject No.: 23				
		S/N:		Sex: M	Race: W	HITE	Ages 20	)		
:		1	Assigned M	ask Size	Category	PF	Values			
:		MASK	Expert Fit	t : Alternate Size : Exp		•	Fit : Alternate :			
:		ILC	ក	:	S					
:		SCOTT	М	:	S	:				
;	AV	ON USIO	М	:	5					
i	-	Height:	178.5 cm		2. Weig	ght: 192 lbs				
3	•	Face Siz	e – Adjusta	ble Metri	c Template	e Circumferen	C수	<u>Cr</u> 143		
4	•	Subpandi	ibular Skinf	old	• • • • • • • • •	• • • • • • • • • • • •	• • • • • • • • • •	4		
5	•	31 tempor	raì Fossa - i	Minisum F	rontal Ar	c - Tape and l	Marker Tool	16.3		
Ÿ	. Biprozygomatic Menton Arc - Tape and Marker Tool 25					25.7				
7	•	Bitragio	n Minieum F	rortal Ar	c - Tape (	Only	• • • • • • • • • •	30.2		
8	•	Bitragio	n Peganian (	erc - Tap	e Only	•••••••	• • • • • • • • • • •	32.4		
7	•	Bitragio	n Miniaum F	rontal Ar	c - Tape I	Holder	• • • • • • • • • • • • • • • • • • • •	¥2.2		
10	•	Bitragio	n Pegonien	Arc - Tap	e Holser .	:		31.4		
11	•	Bizygona	atic Diacete	r - Sorea	ding Cali	er	• • • • • • • • • • • • • • • • • • • •	14.2		
12	•	Ejpros _{yg}	pometic Diese	eter - Sp	reading Ca	eliper	• • • • • • • • •	13.6		
13	•	Mentor: •9	Sellien Diam	eter - Sì	iding Cal	iger		11.6		
14	•	grakāows	atic Diamete	r - Metri	c Gauge	••••••		[4] 9		
15	•	Biprozyg	gometic Diam	eter - Ke	tric Sauge	e	• • • • • • • • • • • • • • • • • • • •	14.3		
÷	•	Mencon 9	Sellion Diam	≥ter - Mo	tric Sauge	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • •	11.9		
17	•		ලෙස ලේ පිටලක							
						·				
18		Confort	6 - 5 (6)	boson	ret esem)					

to the state of the state of the property of the property of the state of the state

A.	Nace: Ti	MOTHY CONNOL	L¥	Subject No.: 24					
	S/N:	·····	Sey: M	Race: ¥	KITE	Age: 19			
<del></del>		Assigned Ma	sk Sire	Category	; PF	Values			
<b>!</b>	niask	Expert Fit	: Altern	nate Size	Expert Fit	Alternate	Size		
:	ILC	. S	: :	M					
:	SCOTT	5	: !	M					
AV	en US10	: !	: : 	M	· 				
1.	Height: 177.0 cm 2 . Weight: 163 lbs								
<b>3</b> .									
4.	Submandibular Skinfold 4								
5.	Bitespo	rai Fossa - M	inimum f	Frental Ar	c - Tape and !	Marker Tool	19.9		
á.	Biprozy	gomalic Mento	n Arc -	Tape and	Marker Tool .	• • • • • • • • • •	25		
7 .	Bitragi	on Minipua Fr	ental A	rc - Tape	Only	);	28.7		
8.	Ritragi:	en Paganian A	rc - Tag	pe Only			32		
Ġ.	Bitragi	an Misiwum Fr	ontal A	rc - Tabe	Holder		31.4		
i0 .	Bitragi	on Paganian A	rc - Tai	p≅ Holder		•••••	31.5		
11 .	Bizygra	atic Diameter	- Spre	adiry Cali	per		14.1		
12 .	Biprozy	gcmatic Diame	ter - S	preading (	Calipo	•••••	12.5		
13.	Menton-	Sellion Diame	ter - S	liding Cal	iper		11.7		
14 .	2izygom	atic Diameter	- Hetr	ic Sauge .			14.4		
15 .	Biprozy	gomatic Diame	eter - h	etric Gauç	je	•••••	13.2		
1 <b>é</b> .	Menton	Sellion Piame	eter - M	etric <del>S</del> auç	je;	••••••	12.2		
17 .	. Observation of Anomalies:								
	**								
18.	Comfort	0-5 (0		orst case:	;				

The second secon

A	- Name: E	RUCE MACKEY				ect No.: 25	<b>;</b>
	S/N:		Sex: M	Race: 8	LACK	Age: 15	ļ
÷·		l Assigned M	ask Size	Category	; PF	Values	1
:	MASK	Expert Fit	: Altern	ate Size	Expert Fit	Alternate	Size
; ;	ILC	; <u> </u>	:	S			
1	SCOTT	} } !	:	5			
; ;	AYEN USIO	: M	:	S	1		
1	. Height:	182.9 cm	•	2. Wei	ght: :88 lbs		
	•		tle Metri		e Circus <del>fere</del> n	:e	<u>52</u> 140
ą	. Subpaand	ibulær Skinfe	old	• 4 • • • • • • •	•••••		*
5	. Biteosc	ral Fossa - !	Miniawa F	rontal Ar	c - Tape and I	Marker Togi	19.1
. ś	. Siproly	gomalic Mente	on Ars -	Tape and	Marker Tool	• • • • • • • • •	26
7	. Bitragie	on Minimum F	rontal Ar	eqeT - :	Osty	,,,,,,,,,,	29.5
3	. Sitragia	en Pagansan (	<del>-</del>	e Only	• • • • • • • • • • •	• • • • • • • • •	<b>33.</b> 2
\$	, Artyagi	en dinimus s	rontal Ar	c - Tape	Helder,		31.5
:0	. Bitray:	er Pajonion (	Arc - Tap	e Holder	• • • • • • • • • • • • •		29.7
1.1	- Bizygom	atic Diamete	r - Spræa	ding Cali	ប់នាំ, ••••••		14
:2	. Biprozy	gomatic Ďlam	eter - Sp	reading C	aliper		15,4
13	. Menten-	Sellion Diam	eter - Sl	taing Cal	:ser	• • • • • • • • • • • • • • • • • • • •	12.5
14	. Birygom	atic Diamete	r – Metr.	c Caoge .		. • • • .	;÷.:
iS	. Biprezv	gomatic Diam	eter – Ma	etric Gauç	ē	• • • • • • • • •	13.6
ìś	- Kenton	Sellion biam	eter – <i>m</i> e	etric Gaug	2,	•••;••••	12.2
17	_	tion of Ange					
						_	
• •		· - ·-					

0 - 5 00 being worst case) ....

A	•	Name: E	VERETT LIKE		Subject	ect No.: 24	•				
	S/N: Ser: M Race: BLACK Age: 22										
÷-			Assigned Ma	sk Site Category	ę.		,				
;		MASK	Expert Fit	: Alternate Size	•	Altarnate	grse				
:		ILC	M	S							
1	-	SCOTT	•	S							
; ·	AV	EN US10	fi	5							
1	•	Height:	175,3 cm	2 - Weig	ent: 142 lbs		•				
3		Face Siz	e – Adjustat	le Metric Templace	e Circumferen:	٠٠٠.٠٠٠ ا	<u>58</u> 148				
4	4 . Submandibular Skinfold 3										
5	-	Bitempor	raį Fossa – M	iniswo Frontal Ard	- Tape and I	Karker Tool	18.5				
Ġ		Biprozyg	pomatic Mento	n Arc - Tap∌ and t	izrker Tool		27 2				
7	•	Bitragi	on Minimum Fr	entai Arc - Tapa (	Miy		29.5				
8	•	Bitragio	on Pegonien A	rc - Tupe Only			31.9				
Ģ		B: tragic	on Miniawa Fr	ontal Arc - Tape i	Holder	• • • • • • • • •	30.5				
10		Bitragio	on Pagantan A	rc - ^T ape Holder			31.7				
1 1	•	Bizygon	atic Diameter	- Spraading Cali	92F +++++++	• ; • • • • • • • •	14.1				
12	•	£i prozyg	oceatic Diame	ter - Spreading C	slipe		13.2				
13	•	Menton-	Sellion Diame	ter - Sliding Cal	iper	,	12.4				
14	-	Bizygom	atic Diamater	- Metric Gauge -	,	• • • • • • • • • •	14.6				
15	-	Biprosy	d <b>c</b> wsz.c <u>D</u> rame	ier - Metrii Gaug	₹,	~••••	14.2				
15	. Menton Sellion Diameter - Motric Seage										
17	•		tion of Anema								
15		Confort	0 - 5 (0	being worst (a <del>se</del> )							

#### DATA/INFURNATION FORM TESTING AT CABO SIZE DETERMINATION XMAG MACK

A		Nazar Ti	HOMAS CRANFORD			S: ·ō	Swajest Na.: 27		
		\$/8:		Bex: M	Raca: W	HITE	Age: 1	<del>?</del>	
•			Assigned M	ask Size	Category	; P			
		MEEK	Expert Fit	: Alter	ate Size	•	: Alternate	Size	
•		(LC	M		i.				
				- -	٤		•	•	
; ;	AV		•	-	Ł	;		•	
1	•	Height:	170.2 ca		2. Wei	ght: 170 lù	:s		
3	-	Face Si.	.e – Adjusta	bìe Hetr:	c Templat	e Carcumiere	nc€	<u>ca</u> 186	
4	-	Submandi	bular Skins	eld		•••••	•••••	\$	
5	-	Bitempor	a. Fosça -	Minisum F	Frontal Ar	c - ^T ap≥ and	Marker Tool	19.5	
Ś	-	Biprozyg	jomatic Ment	en Arz -	Tape and	Marker Tool		26.0	
7	•	Bitragio	en Minioua F	rontal Ar	rc – Tapæ	Galy	• • • • • • • • • • • • • • • • • • • •	29.5	
8	•	Ditragio	on Pegerica	ے۔ - Tap	e Goly			32.8	
9	•	Bitragis	an Minimum F	rontal Ar	-c - Tape	Holder		32	
íŌ	-	Bitragio	n Pogenian (	Arc - Tap	e Holder	• • • • • • • • • •	**,****	32.4	
11	-	gradous	stic Diamele	- Sprea	adıng Cali	per		15.7	
12		Biprotyg	jonatic biam	eter - Sp	oreading C	aliper		12.7	
13	•	Menton-S	Seilich Diam	eter - Si	iding Cal	iper		17.7	
14	•	Brz jigGma	atic Diamete	r - Metri	c Gauge .	• • • • • • • • • • • • •		14.1	
i5	-	Biorczyg	gomatic Diam	eter - He	etric Saug	e		13.2	
15	•	Menton S	Bellion Diam	eter – Me	etric Gaug	e,,.	••••••	:2.9	
;;	-		iion of Anom						
					_				
: 2		Conjunt	0 - 5 (0	haras					

£.	Names Ki	ICHEL FORD			Su	bject i	io.:	28
_	3/N:		Sex: M	Race: B	LACK	•	Age:	20-
:	· ····	Assigned	lask Size	Category	: :		.es	
;	<u> </u>	Expert Fit	Altern	ate Size	•	•	ernal	e Size
:	LC	*		S		:		-
. S	COTT	M	!	L		:		- -
: AVO	N USIO	H	;	5	:	:		_
1.	Heipht:	175.3 ca		2. Wei	ght: 160 l	bs		
		:2 - Adjuwta						<u>ca</u> . 159
٤.	Sಯeanti	bular Skinf	old		•••••			<b>.</b>
5.	B:teacor	al Fosss -	Miniaum F	rontal Ar	ns edeī — a	d Marke	er Tco	1 19.3
ė.	Biprotyg	evatic hent	ion Arc -	Tape and i	Marker Tool	•••••		. 26.5
2.	Bitragio	an Minimum F	rontal Ar	c - Tape	ฏaly	• • • • • •	. <b></b>	. 29.4
8.	bi tray: c	n Peşenion	라c - Tap	e Caly	• • • • • • • • • • • • •	• • • • • •		. 32.5
s.	Site sgio	a Mini≕Ja F	romtal Ar	c - Teop	Hoider			. 32
io.	Pikragio	n Pogenien	Arc - Tap	e Kolder	• • • • • • • • • •			. 31.5
11 .	di zygana	it:r Diagete	r - Sprea	ding Calı	çer	•••		. 14
12 .	Siprozvo	. matic Diem	eter – Sp	reading C	eliper	• • • • • •		. 13.1
is .	<del>オシ</del> のた <b>の</b> カーら	ellion Diag	neter - Sl	iding Cal	iper			. 12.8
14 .	Bizygoma	tic Diamets	r - Metri	c gands .	• • • • • • • • • •	••••		. 14.4
15 .	Eigrazyg	pratic Diam	eter – Me	tric Gaug	e			. 13.5
16	Menton S	Heltich Dien	eter - Me	tric Gaug	ē	• • • • •		. 12.3
		lion of Andr						
-								
13.	Confort	2 - 5 (0	peruc wc	rst case)	•••••			··· -

Α.	wane: D	ARTIN SIMON	S		Su	ubject N	o.: 2	29
							đe: 1	
<del>+</del>	;	Pausgned I	4ask Size	Category	•	PF Valu	es	•
		Expert Fil						
	ILC	. S				;		- :
:	SCOTT	5	:	×		:		- :
•		S		M	:	*		- ;
1 -	Height:	182-9 cm		2. Wei	ght: 150 l	è≤		
₹.	Face Siz	ze · Adjust.	eble Kenri	ic Templat	e Circumfer	.suca	••••	<u>cm</u> . 137
4.	Supaand:	coular Stind	fold	••••	• • • • • • • • • • • • • • • • • • • •	•••••		. 5
5.	Bitempor	ral Fowsa -	ຕະເພດບຸລ ຂ	franța: Ar	c – Tope ar	nd Marke	r Tgo;	18.9
. <b>6</b> •	gracosys	genatic Meni	en Arc -	iape and	Harker Tool	: • • • •	<b>-</b> - •	. 25.3
7.	Datragio	Si Minimum f	Frontwl Ar	ru - Tape	Onjy		••••	. 30.2
ઢ.	Bitragio	on Popentan	are - To	e guly	• • • • • • • • • • • • • • • • • • • •			31.5
٠,	Bitragi:	ლი ტაციათლი (	Frontal Ar	east – o	Holder		· · · ·	32.6
10 .	Biczagio	on Pag <u>u</u> nion	अर: - Tag	? Helder	• • • • • • • • • • • • •		• • • • •	31.5
11 .	Bizygon	etic Diemste	er – Søre.	ding Cali	per		• • • • •	. 13.8
12 .	Biprotyg	gematic Diam	neter - Sp	r⊋ed∙ng C	aliper	•••••		. :3.5
13.	*enton-	Sellion Dia	lacer - Si	iding Cal	iper	• • • • • •		. 12.2
14 .	Bishdowa	atic Diamet	er – Metri	. epued .	• • • • • • • • • • • • • • • • • • • •	,	• • • • •	. :4
15 .	וא פרסבעקי	gometic Dier	affår – 146	etric Cauş	e			. 13-8
is.	Mentor ^c	Sellion Die:	meter - (*e	eiric Faug	9	•••••	· · · · ·	. 12.5
17 .		sion of Ang						
13.	Cemfort	e - 5 (6	y being wo	216 cose)	********	•••••	••••	<b>-</b>

A	•	Name: Di	ENNIS PRIEST		Sub je	ect No.: 30	
		S/N:		Sex: K Racø: Wi	HTE	Age: 19	
<del>:</del>			Assigned Ma	sk Size Category		Values	
;		MASK	Expert Fit	Ajternate Size	•	Alternate	Size
•		ILC	S	M			
:		SCOTT	\$	M			
:	AV	ON USIO	M	5			
1	-	Height:	175.₹ cd.	2. Weig	pht: 190 lbs		<u>C</u> n
3	•	Face Siz	e - Adjustab	le Metric Template	e Circumferend	ce	158
Ą	-	Submandi	ibular Skinfo	14	• • • • • • • • • • • •	• • • • • • • • • •	4
5	-	Bitempor	ral Fossa - K	iniawa Frontel Arc	- Tape and P	Marker Tool	18.3
4	•	Biprozyg	jomatic Mento	n Arc – Tape and P	Marker Tool	•••••	25.4
7	•	Bitragio	on Minisum Fr	ontal Arc - Tape (	άαίγ	• • • • • • • • • • • • • • • • • • • •	29.8
3	•	Bitragio	on Pagenian A	rc - Tapo Caly	• • • • • • • • • • • • •	• • • • • • • • • •	32.1
7	-	Bitragio	on Minimum Fr	ental Arc - Tape :	Holde:	• • • • • • • • • • • • • • • • • • • •	32.1
10	•	Bitragio	en Pagonian A	rc - Pape Holder .	• • • • • • • • • • • • •	• • • • • • • • • •	31.2
11	•	Bizygom	stic Dicaeter	- Spreading Cali	ser	• • • • • • • • • • •	14.4
12	•	Esprozy	gomatic Dia <b>me</b>	ter - Spręwding Ca	aliper	• • • • • • • • • •	13.5
13	•	nenton-	Sellion Diame	ter Sliding Cal	iper	• • • • • • • • • • • • • • • • • • • •	13
14	•	Si sygon	stır Diameter	- Mutric Sauge	• • • • • • • • • • • • •	• • • • • • • • • • • • •	15.3
15	•	Biprozy	gomatic Diame	ter - Metric Gauge	2		14.1
15	•	Menton :	Sellion Diame	ter - Motric Gaug	2	• • • • • • • • • • • •	13.5
17	•	_	tion of Anoma				
		_					
18	•	Comfort	9 - 5 (Q)	being worst case)	•••••	• • • • • • • • • • • • • • • • • • •	

A	. Name: El	CHARD ZALESKI		Subje	ect No.: 3i			
	5/N:		Sex: M Race: W	HITE	Age: 20	i		
+- :	*		sk Size Category	; PF				
:	MASK	Expert Fit	: Alternate Size					
	ILC	ILC   S   M						
;-	SCOTT	SCOTT   N   S						
; ;		VCN US10   9   M						
1	. Weight:	175.3 €%	2 . Wei	ght: 168 lbs				
3	. Faca Si	ze - Adjustab	le Metric Templat	e Circum <b>feren</b> o	:e;	<u>ca</u> 152		
4	. Submandi	ibular Skinfo	ld	• • • • • • • • • • • • •	• • • • • • • • •	ò		
5	. Bitempor	Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Fool 17.						
ć	. Biprozyg	Biprozygomatic Menter Arc - Pupe and Merker Tool 25.						
7	. Bitragio	on Minimum Fr	ontal Arc - Tape	Only	• • • • • • • • •	28.7		
5	. Bitragio	en Pegenien A	rc - Tape Only .	-1	• • • • • • • • •	36.9		
9	. Pitragi:	sn Minimum Fr	ontal Arc - Tape	Holder	• • • • • • • • •	31.3		
10	. Bitragio	on Pagenion A	rc - Tape Holder		• • • • • • • • • •	30.2		
11	. Bizygoma	atic Diameter	- Spreading Cali	per	••••••	14.1		
12	. Biprozyg	gomatic Diame	ter - Spreading C	aliper	• • • • • • • • •	12.9		
13	. Menton-9	Sellion Diame	ter - Sliding Cal	iper	• • • • • • • • •	12		
14	. Rizygoma	atic Diameter	- Metric Gauge .	• • • • • • • • • • • • •		14.4		
tò	. Biprozyg	gomatic Diame	ter - Metric Gaug	e	• • • • • • • • • • • • • • • • • • • •	13.3		
15	. Menton S	Sellion Diame	ter - Metric Gaug	요		12.5		
17		tich of Anoma						
	_	-						
13	- Comfort	0 - 5 (0)	being worst case)		• • • • • • • • • • • • •			

£	•	Nage: Fi	RED GLSON			اتج	bjest	No.:	32	
		S/N:		Sex: M	Race: W	HITE		Aye:	25	
+-			Assigner Ma	sk Size (	Category	!	FF Va	lues		·
:	3	MASK	Expert Fit	: Altern	ate Sice	Expert Fi				
		ILC	S	:	M		:			
•	•	SCOTT	; à	:	21	:	:			
:	AV	ON USIO	S	;	M		: :			
1		∷eight:	172.7 cm		2. Wei	ght: 170 l	bs			<u>ca</u>
3	•	Face Si:	ze - Adjustab	le Metri	c Templat	e Circu <del>nfe</del> r	<b>e</b> nce		••	140
æ	•	Submand	ibular Skinfo	ld			• • • • •			6
5	•	3:tempo:	rel Fossa - M	isimus F	rontal Ar	c - Tape an	d Mar	ker Ts	oi	17.8
ક	•	Biprozy	gomatic Mento	n Arc -	Tape and	Marker Tool	• • • •		• •	24.5
7		Bitragi	on Minieus Fr	ontal Ar	c - Tape	Caly			••	29.3
E		Bitragi:	on Pogerien A	rs - Tap	e Only		• • • • •	. <b></b>	• •	31.3
Ţ	-	Bier agi	on Minipus Fr	ontal Ar	c - Tape	Holder				31.5
i O		Bitragi:	on Pogenien A	rc - Tap	e Holder	••••	• • • • ·			29.5
1 I	_	Birygea	atıc Dieseter	- Sprea	ding Cal:	ger				13.5
12		Biprote	gomatic Diame	ter - Sp	reading (	laliper				12.2
13	-	Menton-	Sellion Diame	ter - S:	iding fai	iper	••••			11.4
íē	•	8129gom	atic Diameter	- Metr:	c <del>G</del> auge .	. <b></b>			. <b></b>	15.8
:5	-	Piprocy	gomatic Drame	ter – Me	etric Gaug	ge				12.9
16	-	Menton	Sellion Diame	ter - Me	itric Bass	3e		• • • • • •		12
17		Observa	tion of Ansaa	i:es:						
						-			-	
		_							-	
iè	-	Co <del>ni</del> snt	0-5-6	being wo	orst case)	·				

Α.	Name: R	ICKY RAYSURN		از طید؟	ect No.: 33	:
	S/N:		Sex: M स्वः सः आ	HITE	Age: 29	
<u>+</u>		 : Assigned Ma	sk Size Category	_	Values	
•	MASK	Expert Fit	: Alternate Size	•	-	Size :
	ILC	; <u> </u>	: M			
•		} **	<del>-</del>	;		
;	VON US10	; S			-	:
i.	Height:	182.9 cm	2. Weig	ght: 200 lbs		
3.	Face St	ze - Adjustab	le Metric Template	e Dircumferend	ce	<u>==</u> 141
4.	Submand	ibular Skinfo	ld	• • • • • • • • • • • •	• • • • • • • • •	5
ş.	<u> Sitempo</u>	ral Fossa - M	inipum Frostal Are	c - Tape and l	Marker Tool	17.8
ė.	Biprozy	gomatic Hento	n Arc - Tape and 1	Harker Tool .	• • • • • • • • • •	24.8
?.	Bi tragi	on Miniæum Fr	ental Arc - Tape (	Only	• • • • • • • • • •	29.3
8.	Ritrag:	on Paganian A	rc - Tape Cnl	• • • • • • • • • • • •		51.4
9.	8:tragi	or Miniawa Fr	ontal Art - Tape i	Holder	• • • • • • • • • • •	51.4
1	Bitr-gi	on Pagenian A	rc - Tape Holder .	• • • • • • • • • • • • •	• • 1 • 2 • • • • •	29.2
11.	Bizygoa	stic Diameter	- Spreading Cali	ser	•• •••••	14
i2 .	Laprozvi	gonatic Diame	ter - Spreading Ca	aliper	• • • • • • • • •	12.2
13.	Kenton-	Sellion Dieme	ter - Sliding Cal	:pe	• • • • • • • • • •	12.3
14 .	Bilygos	atic Diameter	- Metric Gauge .			15.1
15.	Bigrasy	gemetic Diume	ter - Metric Gaug	e	• • • • • • • • • • • • • • • • • • • •	12.8
16 -	Menton:	Sellion Diage	t≁r - Metric Gaug	e		12.5
17	Observa	tion of Andma	l:es:			
18.	Coxfort	6-5-6	teing worst case)			

CONTRACTOR OF THE PROPERTY OF

<b>6.</b>	Nass L	isa watts			وزطيد	est No.: 36	\$		
	S/N:		Sex: F	Race: W	HITE	स्पृ <b>टः</b> 18	3		
:		Assigned Ma	sk Size	Category	! ?F	Values			
	MASK	Expert Fit	: Altern	ate Sice	Expert Fit	Alternate	Size :		
	ILC	ILC S M							
:	SCOTT	\$		<b>X</b>			;		
: A'	VON US10	\$ 	:	M 					
1.	Height:	157.5 ca		I. Wei	ght: 135 lbs		<u>ca</u>		
3.	Face Si:	ze – Adjustal	ole Metri	c Templet	e Circumferana	:e	132		
4.	Submandi	ibular Skinfo	eid	• • • • • • • • •	• • • • • • • • • • • • • • • • • • • •		4		
5.	B: tempo	ral Fossa - 1	inieus F	ron'sl Ar	c - Tape and I	Marker Tool	16.9		
ė.	Biprezy	gosatic Mento	on Arc -	Tape and	Marker Tool		24.6		
7.	Bitragia	on Miriaua Fr	rontal Ar	c - Tape	Qoly		28.5		
з.	3i tragi:	on Peganien (	£∟ - ⊥≌ΰ	e Only			29.5		
₹,	Bitragi	on Miniewa Si	rontal Ar	с – Таре	Holder		30.2		
10.	Bitrag:	on fragorion i	Arc - Tap	e Holder	••••••		26.2		
īī.	Si z vgu-s	atic Dia <b>mete</b>	r - Sprea	nding Call	ger		12.9		
::·.	Siprocy	gomatic Diam	eter - Sp	oreading C	aliper		11.9		
17.	-ಚಾತೆಗಿಕ್ಷಣ	Sellion Diam	eter - Si	iding Cal	iper	• • • • • • • • • • •	12.1		
14 .	Bi syge#	atic Diamete	r - Hetri	c gande .	••••••		13.8		
15 -	Biprocy	gematic Diam	eter - Me	etric Baug	e		12.7		
15 .	Menton	Sellion Diam	eter – Me	etric Gaug	2		12		
ŧ7.		tion of Ance							
18.	L-Mize t	0 - 5 (0	being w	orst case)	••••••				

COLLEGIS DE LA COLLEG

A	•	Name: JE	ERRY LAENIER			Subj	ect No.:	<b>35</b>
		S/N:		Sex: M	Race: W	HITE	Age:	21
:			Assigned Mas	sk Size :		: PF	Values	
:	1	MASK	Expert Fit	Altern	: Alternat	e Size		
		ILC	. S		М	:		
:		SCOTT		: : :	S	!		
:	: AVON US10 : S : M : :							
1	•	Height:	180.3 cm		2. Wei	ght: 135 lbs		
3		Face Siz	ce - Adjustab	le Metri	c Templat	e Circumferen	ce	<u>cm</u> 146
4	•	Submandi	ibular Skinfo	ld	• • • • • • • •	••••••		. 4
5	•	Bitempor	rai Fossa - M	icieua F	rontal Ar	c - Tape and	Marker Too	18.1
હ	•	Siprozy	gomatic Mento	n Arc -	Tape and	Marker Tool .		25
7		Bitragi	go Minimum Fro	ontal Ar	c - Tape	Only	• • • • • • • •	27.9
3	•	Bitragio	on Pagentan A	rc - Tap	e Onlv	••••••		32.1
5	•	Bitragn	en Piniava Fr	ontal Ar	c - Tape	Holder	• • • • • • • • •	30
10	•	Ritragr	or Pegenian A	rc - Tap	e Holder	•••••	•••••	31.0
11	•	Sirygom	atic Diameter	- Sprea	ding Calı	per		13.2
12	-	Biprozyg	gematic Diame	ter - Sp	reading C	aliper	• • • • • • • • •	12.4
13	•	Menton-S	Sellion Diame	ter - Sl	ıding Cəl	iger	••••••	12.2
14	•	gradow	atic Diameter	- Metri	c Gauge .	••••••	• • • • • • • •	13
15	-	Biproz.	gomatic Diame	ter - Me	etric Gaug	e		13
1é	-	Menton :	Sellion Diame	ter - Me	etric Gaug	e	• • • • • • •	12.3
17	•		tion of Ancae					
10		Confort	0 = 5 (0)	boing wo	eci caca;			

CHARLES THE CONTRACT OF THE CO

A . Name: L	INDA WARREN		Subje	ect No.: 36	•			
ร/ห:		Sex: F Race: W	HITE	Age: 34	•			
<del>+</del>	: Assigned Ma	sk Size Category		Values	<del></del> ;			
MASK	-	: Alternate Size	7		-			
ILC								
SCOTT	; S	•			:			
: AVON US10	3	M		·				
1 . Height:	157.5 cm	2. Wei	-					
3 . Face Si	ze - Adjustab	le Metric Templat	e Circumferen	ce	<u>50</u> 126			
4 . Submand	ibular Skinfo	ld		•••••	3			
5. Bitempo								
6. Biprozy	Biprozygomatic Menton Arc - Pape and Marker Tool 23							
7. Bitragi	on Mini≂um Fr	ontal Arc - Tape	Only	•••••	29			
8 . Pitrag:	on Projenten A	rc - Tape Coly	•••••	•••••	28.5			
9 Sitragi	on Minimum Fr	ental Arc - Tape	Holder	• • • • • • • • • • • • • • • • • • • •	30.2			
10 . Ertrag:	en Peganien A	rc - Tape Holder	••••		28.2			
11 . Bilygon	eatic Diameter	- Spreading Cali	per		17.6			
12 . Bigrosy	gomatic Drame	ter – Spreading (	laliper		12.6			
13 . ∺enton-	-Seilion Diame	ter - Sliding Cal	iper		11.3			
14 . Bizygos	matic Diameter	- Metric Gauge .			·7.8			
i5. Bipros	rgomat:⊂ Olame	ter - Metric Gauc	je	•••	13.2			
16 . Menton	Sellion Drame	ter - Metric Bauq	je		12.1			
	ition of Anoma							
		being worst case)						

						-	ect No.: 3	5 <b>7</b>
			Sex: M		BLACK		Age: 2	
+		: Assigned Ma	sk Size	Category	<b>y</b>	PF		
:	MASK	Expert Fit			•			
1	ILC	M	;	S	1			
1	SCOTT	M ₁	1	S	-			•
Î A	VON US10	•	!	ន				•
1.	Height:	198 cm		2 . We	eight: 1	65 lbs		
ӟ.	Face Si	re - Adjustab	le Metri	: Templa	ate Circu	nferen	c <b>e</b> .	<u>cm</u> 167
4.	Submandi	ibular Skinfo	ld				• • • • • • • • • •	6
5.	Bitempor	ral Fossa - M:	inimum Fr	rontal A	Arc - Tap	e and l	Marker Tool	18.
6.	Biprozyg	gomatic Mentor	Arc -	Tape and	d Marker '	Tool .	• • • • • • • • • •	27
7 .	Bitragio	on Minimum Ero	ntal Arc	: - Tape	Only			29.
₿.	Bitragio	on Pogonion Ar	o - Tape	e Onlv .				31.
₹.	Bitragio	or Minimum Fro	ontal Arc	: - Taps	Holder .			32
ο.	Bitragio	on Pogoni <b>o</b> n Ar	c - Tape	e Holder				30.
1.	Bizygoma	atic Diameter	- Spread	ding Cal	iper			14.
2.	Biprozvo	omatic Diamet	er – Spr	eading	Caliper .			13.3
3 .	Menton-S	Sellion Diamet	er - Sli	ding Ca	liper	• * • • • •		12.
ą. <u>.</u>	Bizygoma	tic Diameter	- Metric	Gauge				15.
5.	Biprosyg	omatic Diamet	er - Met	ric Gau	ge		*******	14.2
5.	Menton S	Sellion Diamet	er - Met	ric Gau	ge		• • • • • • • •	12.
7,	Observat	ion of Anomal	ies:					
	Miles (Print AM) (Berry July 1999 1997)	. But was the the the the transition of the tran	Marie Santa Simple Andrews S. State Care Simple	traditions the later restrict the	e ga e e e e e e e e e e e e e e e e e e	arm that will such that and		
	where the state of	. A squadortycho deda trock to the	ales elle treet care - a sold faire s	wine the deposit of the code and the code	Microsoft pater versa system drove from or others	all of the same specific	with only and you as	
	ration is not unaspective and	common and mathematicated transform about 300 material materials design of 1200 Mar.	Market or Britan was the second of the second	i ina makatikan galakan mengah ina	too, and stay of the trade of the second		Part of the same of the same made some	

Α.	Name: C	HRISTOPHER WAL	ZEL.	Subj	ect No.: 38	}			
			Sex: M Race: Wh						
+ ··-		: Assigned Mas	sk Size Category	PF	Values				
; ;	MASK		Alternate Size		: Alternate				
	ILC		S	•		•			
ì	SCOTT :	M	S			i			
; A	VON US10 :	M	5			1			
•	Height:	177.8 cm	2. Weig	ght: 185 lbs		<u>cm</u>			
<u>.</u>									
4 .			d			6.5			
5.	Bitempor	-al Fossa - Mi	nimum Frontal Arc	: - Tape and i	Marker Tool	19			
6.	Biprozygomatic Menton Arc - Tape and Marker Tool 26.								
7 .	Bitragio	on Minimum Fro	ntal Arc - Tape (	Only		29.2			
a .	Bitragic	on Pagenian Ar	c - Tape Only	• • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	31			
⇒ .	Bitmagic	on Minimum Fro	ntal Arc - Tape H	Holder		31.2			
to .	Bitragio	on Pogoni <mark>on</mark> Ar	c – Tape Holder .			30.3			
1.1.	Bizygoma	atic Diameter	- Spreading Calip	er		13.7			
12.	Biprozyg	pomatic Diamet	er - Spreading Ca	aliper		12.8			
13.	Menton-9	Sellion Diamet	er - Sliding Cali	per		12.3			
14 .	Bizygoma	atic Diameter	- Metric Gauge			14.7			
15.	Biprozyg	pomațic Diamet	er - Metric Gauge			14			
16.	Menton S	Sellion Diamet	er - Metric Gauge			12.8			
17		tion of Anomal							
ė			been dade after drug group diese verd vand vande dade steht daar spill steht diese spill steht dese pro- legen ander steht steht drugs verd verd vijn vand die de de gebo spill steht telen som de de de de d			e Cob			
18.	Comfort	0 - 5 (0 b	eing worst case) 225	Ве	st Avallas				

Α		Name: A	NTHONY SAUND	ERS			Sub j	ect No.:	39
			مند					Age:	
+			! Assigned M	ask Size	Category	/ 1	PF	Values	
:		MASK	Expert Fit	Altern	ate Size	e i Exper	t Fit	: Alterna	te Size
;		TLC	M	•	L	i			-
			L						
ţ	AV	ON US10		;	M			:	
•			185.4 cm						
3		Face Si:	ze – Adjustal	ole Metri	c Templa	ate Circu	mferen	:e	208
4	•	Submandi	bular Skinfo	old			• • • • • •	• • • • • • • •	4
5		Bitempor	al Fossa - M	1inimum F	rontal A	rc - Tap	e and t	Marker To	001 20.5
6		Biprozyg	gomatic Mento	on Arc -	Tape and	Marker	Tool .		29.5
7		Bitragio	on Minimum Fr	ontal Ar	c - Tape	only	• • • • • •	· · · · · · · · ·	32.5
8		Bitragio	on Paganian A	Arc - Tap	e Only .				35
9		Bitragio	on Minimum Fr	ontal Ar	c - Tape	Holder	• • • • • •		34.5
ιo	٠	Bitmagic	n Pagani <b>on</b> A	arc - Tap	e Holder		<i>.</i>	• • • • • • • •	34.3
11	•	Bizygoma	atic Diameter	- Sprea	ding Cal	iper			14.4
12		Biprozyg	omatic Diame	iter - Spi	reading	Caliper			13.3
13	•	Menton-S	Sellion Diame	eter - Sl:	iding Ca	liper			14.7
4		Bizygoma	itic Diameter	- Metri	c Gauge				14.8
15	•	Biprozyg	pomatic Diame	ter - Me	tric Gau	ge			14.3
16	•	Menton S	Sellion Diame	ter - Me	tric Gau	ge			14.8
17	•		ion of Anoma						
			ومة الكلف معينا شده حضل بلادة ومن بالكل علمه بيرية يعين ويريد و من الكلف الله على الله على الله الله الله الله الله الله الله ال		-	ة هن. نورد على نيب كنه يعمر واقد بابير			
			t among good those. And stating their name origin glove house origin big It was a table table origin name arms a same brooks as a constitution good above thing						
18		Comfort	0 ~ 5 (0	being wor	-st case	),			

Α.	Name: D	NOSNHOL YNNA		Subje	ect No.: 40	1
			Sex: M Race: BO		Age: 19	
+		Assigned Ma	sk Size Category	: PF		
; ;		Expert Fit	: Alternate Size	Expert Fit	: Alternate	Size
ì	ILC	•	! S	•		
į	SCOTT	. M	•			
;	VON US10	M	5			
1.			2. Wei			
<b>3</b> .	Face Siz	ze – Adjustab:	le Metric Templato	e Circumferend	:e	<u>cm</u> 129
4.	Submandi	bular Skinfol	ld			4
ទ .	Bitempor	al Fossa - Mi	inimum Frontal Ar	= ~ Tape and 1	1arker Tool	18
٤.	Biprozygomatic Menton Arc - Tape and Marker Tool 25.1					
7.	Bitragio	on Minimum Fro	ontal Arc - Tape (	Only		29.8
8.	Bitragio	on Paganian Ar	c - Tape Only		••••••	30.5
9 :	Bitragio	on Minimum Fro	ontal Arc - Tape H	Holder		32
. oı	Butragio	on Pagani <b>on</b> Ar	c - Tape Holder .		• • • • • • • •	30.4
11.	Bizygoma	atic Diameter	- Spreading Calip	oer		14.1
12.	Biprozyg	pomatic Diamet	er - Spreading Ca	aliper		13.2
1图。	Menton-S	Sellion Diamet	er - Sliding Cal:	iper		11.8
14.	Bizygoma	atic Diameter	- Metric Gauge		• • • • • • • • • •	14.4
15.	Biprozyg	pomatic Diamet	er - Metric Gauge			13.9
16.	Menton S	Sellion Diamet	er - Metric Gauge	·	• • • • • • • • • • • • • • • • • • • •	11.9
17 .		ion of Anomal				
			or selle flow with this park have upprofile only case will upp care this disk that the selle is no selle case care that this data will give any that park that data that the selle is the s			
			an i ya mang ujan 1985 nga man iyan uga naga naga nan mah ilan dan dan ilan sahin sahi na Sa naya iyan iyan dan man man ilan da sahi man man da sahi man sahi na sahi na sahi sahi sahi sahi sahi sahi s			
18 .	Comfort	0 ~ 5 (0 b	peing worst case) 227	····Best Ava	ilable Co	 ру

", whole are an extension and the form of the second of th

Α.	Name: P	AT JOHNSON		Subj	ect No.: 4	1
	S/N:		Sex: M Race: W	нјте	Age: :	8
+ ⁻			ask Size Catagory	: PF	'alues	
:	MASK	Export Fit	: Alternate Size	•	=	
:	IFC		: M			
:	CCOTT	. 5	•		· 	. :
: AV	ON USIC	S		_		
1.	Height:	175.3 cm	2. Weig	ght: 150 lbs		
₹.	Fac≤ Siz	ze - Adjustai	ole Metric Template	e Circumferenc	e,	<u>ÇM</u> 134
4.	Submand	bular Skinfo	old	• • • • • • • • • • • • •		3 -
5.	81t∈apor	rai Fossa - N	Minimum Frontal Are	t bna egaT - z	1arker Tool	38.3
<b>5</b> .	Biprozyo	gematic Mento	on Arc - Tape and 1	Marker Tool		26. 1
7.	Bitragio	on Minimum fo	contal Arc - Tape (	⊡nl∨	.,,	29
8.	Bitr≈gio	on Pogenian A	arc - Tape Only	• • • • • • • • • • •		35
7.	Bitragio	an Minimum Fr	rental Arc - Tabe H	Holder		30.8
16 .	ās trags o	on Pagenion 4	Arc - Tapa Holder .	• • • • • • • • • • • • •		31.1
11.	grzyčom	atic Diameter	Spreading Calı	per		13.6
12.	Biprocyg	gemetic Diame	eter - Spreading Ca	aliper	• • • • • • • • • •	12.9
13.	Menton-9	Sellion Diame	iter - Sliding Cali	iper		12.4
:4 .	Fizygona	atic Diameter	- Metric Sauge	• • • • • • • • • • • • •	• • • • • • • • • •	14.1
15 .	Biproz.	gomatic Diame	eter - Metric Gauge	e		17.4
ló.	Menton S	Sellion Dlams	eter - Metric Sauge	<b>≥</b>		12.7
17 .	Obsar-at	tion of Anoma	: :::ev:			
	_					
13 .	Comfort	0 - 5 (0	being worst case)	•••••		

A	A . Name: DAREYL DIXON Subject No.: 42											
		S/N:		Sexf M Race: 30	_ACK	Aya: 19	9					
:			Assigned Mas	sk Size Category	;							
:	1	MASK	Expert Fit	Aiternate Size	Expert Fit	Alternate	Size					
:		ILC	17	L								
		SCOTT	M	<u>L</u>								
: '	46	GN R210 :	M									
1	•	. Height: 175.3 cm 2 . Weight: 179 lbs										
3		Face Siz	e - Adjustab)	le Metric Template	e Circumferend	:e	<u>ca</u> 148					
4	-	Submandibular Skinfold 9										
5		. Bitemporal Fessa - Minimum Fronta: Arc - Tape and Marker Teol 18.5										
÷	•	. Biprozygomatiz Henton Arc - Tage and Marker Tool 27.3										
7	•	Sitragio	on Minimum Fre	ntal Arc - Tape (	Only	• • • • • • • • • • • • • • • • • • • •	29.5					
9	-	Bitragio	on Paganian Ar	c - Tape Only	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	34.4					
5	•	Bitragio	on Minieum Fre	ontal Arc - Tage i	Holder	• • • • • • • • •	32					
10		Bitragio	on Poyunion Ar	c – Taga Holder .	••••••	• • • • • • • • • •	33.4					
11	-	Bizygoma	etic Diameter	- Spreading Cali	per	,	14.4					
:2		in prosv <u>e</u>	posatic "lame	ter - Spreading Ca	aliper		13, 6					
ij	-	Menton-9	Sellion Stame	ter ~ Sliding Cal:	iper	• • • • • • • • • • • • • • • • • • • •	12.6					
14	•	Bizygona	atic Diameter	- Metric Gauge .	• • • • • • • • • • • • •		15.1					
15	•	Bipricy	jomatic Diame	ter - Metric Saug	2	• • • • • • • • • • • • • • • • • • • •	14.1					
16		Menton S	Sellion Diame	ter - Metric Gaug	2	•••••	12.5					
17	•	Observat	tion of Anoma	lies:								
		_			•							
13	•	Comfort	0 - 5 (0)	seing worst case)	••••••	• • • • • • • • • • •						

s/N:		Sex: M Race: Bl	LACK	Age: 19	7
+		sk Size Category		Values	
MASK	Expert Fit	: Alternate Size	•	•	
ILC	; M	5			
SCOTT	, M	5		1	
AVON US1	.o : M	L	1 1 4		
. Face		2 . Weig le Metric Template ld	Circumferen		<u>cm</u> 16
. Bitem	poral Fossa - M	inimum Frontal Arc	- Tape and I	Marker Tool	19
. Bipro	zygomatic Mento	n Arc - Tape and M	Marker Tool	• • • • • • • • • • • • • • • • • • • •	26
. Bitra	gion Minimum Fr	ontal Arc - Tape (	Only		29
. Bitra	gian Paganian A	rc - Tape Only		• • • • • • • • • • • • • • • • • • • •	32.
. Bitma	gion Minimum Fro	ontal Arc - Tape H	Holder	*******	31.
. Bitra	gion Pogonion A	rc - Tape Holder .	• • • • • • • • • • •		31.
. Bizyg	omatic Diameter	- Spreading Calip	er,		14.
. Bipro	zygomatic Diame	ter - Spreading Ca	diper		13.
. Mento	n-Sellion Diame	er – Sliding Cali	per		12.
. Bizyg	omatic Diameter	- Metric Gauge			14.
. Bipro	zygomatic Diame	ter - Metric Gauge			13.
. Mento	n Sellion Diamet	er - Metric Gauge	••••••	• • • • • • • • • • • • • • • • • • • •	13.
. Obser	vation of Anomal	ies:			

Α.	Name: R	ONALD EPPS			Subje	ect No.: 44	ŀ
						Age: 22	
+		: Assigned M	ask Size	Category	: PF	Values	
		•	: Altern	ate Size	Expert Fit	Alternate	
;	ILC	, , M		L			
i	SCOTT	•	1	1			
AV	ON US10	M	1	l_			
·					ght: 210 lbs		
₹.	Face Sia	ce - Adjustal	ole Metri	c Template	e Circumferenc	:e	<u>cm</u> 205
4.	Submandi	ibular Skinfo	old				5
5.	Bitempor	ral Fossa - I	Minimum F	rontal Arc	= - Tape and N	Marker Tool	19.5
ė.	Biprozyc	jomatic Mento	on Ard -	Tape and h	Marker Tool		30.3
7.	Bitragio	on Minimum Fr	contal Ac	c - Tape (	Only		30
8.	Ritrogic	on Pogonium A	Arc - Tap	e Only		B B B R B B B R B B	35.5
9.	Bit agi	on Minimum F	ontal Ar	c - Tape F	Holder		32 <b>.5</b>
10 .	∌∘bragic	m Paganion A	Arc - Tap	e Holder .			35
11 .	Bizygome	atic Diameter	Sprea	ding Calip	er		14.4
12.	Biprozyg	pomatic Diame	eter - Sp	reading Ca	diper	• • • • • • • • • • • • • • • • • • • •	13.6
13.	Menton-S	Sellion Diame	eter - Sl	iding Cali	per		14.7
14.	Bizygoma	tic Diameter	Metri	c Gauge			15.7
15 .	Biprozyg	gomatic Diame	eter - Me	tric Gauge			14.8
16.	Menton S	Sellion Diame	eter - Me	tric Gauge	·		15.2°
17.		ion of Anoma					
					و مدينة والله ومدين منطقة مدينة والمنافقة المنافقة المنافقة المنافقة والمنافقة المنافقة والمنافقة والمنافقة و و المنافقة والمنافقة		
					agus milit punt selet mus coin coin coin guin milit que mus milit suit selet suit mus selet suit selet suit s A coin coin guin anni coin thin coin coin coin anni anni anni anni anni anni anni a		
18.	Comfort	0 - 5 (0	being wa	rst case)			

A . []	. Name: LISA WHÁLEY Subject No.: 45							45
s	/N: -~		Sex: F	Race: W	HITE		Age:	25
<del>+</del>		Assigned Ma		Category	 : :	PF Va	lues	
. Ma	SK	Expert Fit	: Altern		•	=		
IL	C	,	:		:			
SD	017	, M	•	S	:			
PYCN	USIO	. M	-			. :		
1 . H	eight:	162.6 cm		2. Wei				
3. F	ace Si	ce - Adjustab	le Metri	c Templat	e Circumfe	rence	• • • • • •	<u>ce</u> 128
4. <u>S</u>	ubmand:	ibular Skinfo	la					. 6
5. 9	ıtempo	ral Fossa - M	inimum F	rontal Ar	c – Tape a	nd Mar	ker Too	1 :0.2
6. B	iprozy	gomatic Mento	n Arc -	Tape and	Marker Too	1		. 25.3
7. B	itragi	อก Minioum Fr	ontal Ar	c - Tape	Only	• • • • •	•••••	. 28.2
8. B	n tregi	on Fogenian A	rc - Tap	e Only	• • • • • • • • •	• • • • •		. 30.5
9. 9	itragi	on Miniaum Fr	ental Ar	с - Таре	Holder			31.5
10 . P	itragi	on Pogeni <b>on</b> A	rc - Tap	e Holder	•••••			. 30.4
11 . B	ารงดูอด	atic Diameter	- Sprea	ding Cali	pe	• • • • •		. 12.9
12. 8	iprezv	gomatic Diame	ter - Sp	reading C	aliper			. 12.2
13 . M	enten-1	Sellion Diame	ter - Sl	iding Cal	ıper			. 11.9
14 . B	a zygom	atıc Diameter	- Metri	c Gauge .			••••	:3.3
15.8	uprezy	gamatic Diama	iter - Ne	etric Gaug	e			. 12.9
16 . M	lenton (	Sellion Diame	ter - Me	trıc Gaug	₽		••••	. 12
17 . 0	bser va	tion of Aname	ilies:					
18 . C	on <del>f</del> ort	♦ <b>- 5</b> • 9	perud mo	rst case:				

THE PROPERTY OF THE PROPERTY O

A	. Name: MICHAEL WRIGHT Subject No.: 46								
		S/N:		Sex: M	Race: B	LACK	Age: 18	3	
÷·			Assigned Ma	ask Size Category : PF Val				<del></del>	
:		MASK	Expert Fit	Alternate Size   Expert Fi			•		
!		ILC	S	:	М				
;		SCOTT	M	•	L	:			
;	AV	AVDN: US10 : M : S : :							
						ght: 163 lbs e Circumferen		<u>ca</u> 145	
	•				-			4	
5	•	Bitempor	ral fossa - *	inısum F	rental Ar	c - Tape and	Marker Tool	18.9	
Ġ		Biprozyg	gonatic Mento	n Arc -	Tape end	Marker Tool .		25.2	
7		Bitragio	en Misimum Fr	onta] Ar	c - Tape	Only		30,4	
8	•	Bitragio	an Pogonion A	r: - Tap	> Only	• • • • • • • • • • • •	• • • • • • • • • • •	32.3	
9	-	Bitragio	on Minimum Fr	ontal Ar	c – Tape	Holder		32.5	
10	•	Bitragio	en Pegenien A	rc - Tap	e Holder	• • • • • • • • • • • • • • • • • • • •	•••••	31.3	
11		Bizygona	atic Diameter	- Sprea	ding Cali	per	,	14.6	
12		Stancerq	gonatic Diame	t <del>er</del> - Sp	reading (	aliper	•••••	13.2	
17	•	Menton-9	Sellion Diame	ter - Sl	iding Cal	iper	.,	12.4	
14	-	Brzygena	etic Diameter	- Metri	c Sauge .	•••••		14.5	
:5	•	giblosA	gomai's Diame	ter - Me	tric Gauç	e		13.6	
15	•	Menten 9	Sellion Diame	ter - Me	tric Gaug	e	•••••	12.9	
17	•		tion of Anoma						
. =									
15	•	Comfort	$\phi = 5 - \phi$	peind Mo	rst case)		,	~	

ė. Na	me: CH	AUNICEY BROOK	'S	Sub j	ect No.: 47	,			
5/1	V:		Sex: M Race: B	LACK	Age: 22	•			
:	:	Assigned Ma	sk Size Category		Values	<u>+</u>			
: MASI			: Alternate Size	: Expert Fit	: Alternate	Size !			
ILC	:		: N		:	:			
SCOT	SCOTT   M   5   ;								
: AVON I	AVON US10 : S : M : :								
1 . He	ight:	182.9 cm	2. Ke:	ght: 150 lbs					
3. Fac	e Siz	e – Adjustab	ie Metric Templat	e Circumferen	ce	5 <u>2</u> 152			
4 . Sui	onandi)	bular Skinfo	ld	••••••	••••	4			
5. 919	temar	al Fossa - M	inimum Frontal Ar	c - Tape and i	Marker Tool	18			
6. Biş	eraz vg	omatic Mento	n Arc – Tape and i	Marker Tool .	• . • • • • • • • • • • •	15.6			
7 . Bi	tragio	n Minimum Fr	ontal Arc - Tape	Onlv	• • • • • • • • • • • • • • • • • • • •	30			
8 . Bi	tragio	n Pogonien A	rc - Tape @nly		• • • • • • • • •	30.5			
9. 9.	trag. 3	n Miniawa Fr	ontal Arc - Tape :	Molder		33			
1). 81	tragic	r. Fogensen 9	rc - Tape Holder	•••••	• • • • • • • • •	30 5			
1 . Bi	:vg.,a+	tic Diameter	- Spreading Cali	per	· • • • • • • • • • • • • • • • • • • •	13.2			
II. Bış		od lic Diame	ter - Spreading C	aliper	• • • • • • • • • • •	12.4			
IJ. Mer	nton-S	ellion Diame	ter - Sliding Cal	iper	• • • • • • • • • • • • • • • • • • • •	13.2			
14 . Pi:	:ygees	tic Dianeter	- Metric Gauge .	•••••	•••••	13.5			
15 . Big	onozyg	cmatic Diame	ter - Metric Gaug	e		12.8			
là. Mer	nton S	ellion Diame	ter – Metric Gaug	e	• • • • • • • • •	12.9			
		ion of Anoma							
			being worst case)						

A . Name:	DONALD S. COOK		Sub j	ect No.: 4	8
S/N: -		Sex: M Race: (	#HITE	Age: 2	5
†	i Assign∉d Ha	sk Size Category	: PF	Values	
MASK	: Expert Fit	Alternate Size	•	: Alternate	Sile
: ILC	. M	: :	:	:	
: SCOTT	; S	i m	:	:	
AVON US10	: H	•		:	
i. Height	: 172.7 cm	2 . Wei	ight: 166 lbs		
3. Face S	ize - Adjustab	le Metric Templa	te Circumferen	ce	<u>ca</u> 127
4 . 5 man	dibular Skinfo	ld		• • • • • • • • • • • • • • • • • • • •	3
5. Bitemp	oral Fossa - M	iniaua Frontsl &	rc - Tape and	Marker Tool	18.2
é. Riproz	vgomatic Mente	Arc - Tape and	Marker Tool .	• • • • • • • • • • • •	25.2
7. Sitrag	ion Minimum Fr	ontal Arc - Case	Qniv	• • • • • • • • •	29,2
8. Bitrag	on Pogonien A	rc - Tape Colv	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	30.a
9. Bitrag	ion Mirieum Fr	ental Arc - Tage	Holder	. <b></b>	71.5
iO . Bitrag	ion Pogynion A	rc - Tape Holder	•••••	• • • • • • • • • • • • • • • • • • • •	50.1
li. Bizvge	matic Brazeter	- Spreading Cali	iper		14.7
12. Biproz	vgometic Drame	ter - Spreading (	Jaliper		17
17. Menton	-Sellion Diase	ter - Sliding Ca.	)iger	• • • • • • • • • • • • • • • • • • • •	12
14. Bizygo	matic Diameter	- Metric Gauge		- • • • • • • • • • • • • • • • • • • •	; ē
15. Biprez	vgomatic Diama	ter - Metric Gau	ge		17.
ló. Menton	Sellion Diame	ter - Metric Sauq	ge		12.5
17. @oserv	ation of Anosa	l:es:			
		being worst case			_ <b>-</b>

A . Name: ROBERT WEINSTEIN . Subject No.: 49										
	9	S/N:		Sex: H Race: 🛂	HITE	Age: 19				
+- :			Assignew Mas	sk Size Category	PF	Values	+ !			
:	14	ASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size :			
i -	I	LC	S	H		:	:			
;	St	COTT	×	S			;			
-	ÁVDI	AVDN US10 : N : S : :								
1 . Height: 171.5 cm 2 . Weight: 146 lbs										
3	. :	Face Siz	ze – Adjustabi	le Metric Templats	e Circuaferen	ce	<u>c.a</u> 142			
4	. :	Subsandi	ibular Skinfo	ld	• • • • • • • • • • • •	•••••	3			
5	. !	Bitempo	raı Fossa - M	inisum Frontal Arc	- Tape and I	Marker Tool	18.6			
દ	. :	Biprozy(	gematic <b>Mento</b>	n Arc - Tape and R	tarker Tool .	•••••	25			
7	. ;	Ritragio	on Minimum Fr	ontal Arc - Tape (	Only		28.7			
8	. :	ditrag:	an Pagonien A	rc - Tape Only	• • • • • • • • • • •	• • • • • • • • • • •	30.4			
7	. ;	Bitragi:	on Minimus Fra	ontal Arc - Tape :	holder	•••••	30.6			
:0	- 3	Bitrag:	on Pegenion A	rz - Tape Holder .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • •	30.5			
ij	. :	Bizygom	etic Diameter	- Spreading Cali	oer	• • • • • • • • • • • •	13.5			
12	. :	8:prozv	gomatic Diame	ter - Spreading C:	aliper		12.8			
13	. :	Henton-!	S <b>e</b> llion Diame	ter - Sliding Cali	iaer		13			
: =	. :	Sizygoni	atir Diameter	- Metric Gauge	•••••		14.2			
:=	. !	Biprozy	gomatic Diame	ter - Metric Gauge	e		13			
:5	_ i	Menton (	Sellion Diame	ter - Metric Saug	e	• • • • • • • • • •	13			
57	•	(Eserva)	tion of Anoma	lies:						
	_									
	-									
173	. :	Confort	0 - 5 (0)	teing worst case)	••••					

THE PROPERTY OF THE PROPERTY O

A	•	Name: M	ORGAN MEAD				Subje	et No.	: 5	o
		5/N:		Sex: M	Race: W	HITE		Ag∈	: 1	9
:				Values						
:		MASK   Expert Fit   Alternate Size   Expert Fit   Alternat							nate	Size
:	ILC M S :						:			
:		SCOTT			L		:			
:	AV	ON US10	. M	:	L	:	;			
1	•	_	180.3 ∈m			_				<u> </u>
3	•		ze – Adjustabi							165
ą	•	Submand	ibular Skinfo	id	• • • • • • • • • •	• • • • • • • •	••••	* • • • • •	• • • •	4
5	•	Bitempo	ral Fossa - M	iniœum F	rontal Ar	c - Tape	and H	larker	Tool	19.5
5	•	Biprozy	gomatic Mento	n Arc -	Tape and !	Marker To	ool	•••••	• • • •	27.2
?	•	Bitragi	on Miniaum Fr	ontal Ar	c - Tape	Galy		•••••		31.1
3		Bitragi	on Paganian A	rc - Tap	e Onlv		• • • • •	•••••	• • • •	<b>35</b>
Ó	•	Pitragi:	on Alniaum Fr	ontal Ar	с - Таре	Holder				22
10		Bitragi	on Pagenion A	rc – Tap	e Holder	• • • • • • • • •			• • • •	32 <b>.5</b>
11	•	Bizvgee	atic Diameter	- Sprea	ding Cali	per			• • • •	14
12	: -	Biprozy	gomatic Diame	ter - Sp	reading C	aliper				13.4
13	: •	i <del>l</del> enten-	Sellion Diame	ter - Si	ıding Sal	iper				13.6
1-3		grzygew	atic Diameter	- Metr:	c Sauge .				• • • •	14.2
15		grbtosk	gomatic Diame	ter - Ke	tric Gaug	e	. <b></b> .		- • • •	13.6
1 ć	٠.	Menten	Sellion Diame	ter - Me	trıc Gauç	e			· · · ·	13.6
17	• •		tion of Anoma							
18	; .		0 - 5 (0							

£	٠.	Name: E	RNEST HUTSON				Sub je∈'	t No.:	51
		S/N:		Sex: M	Race: W	HITE		Age:	25
•			Assigned Ma	sk Size (	Category	:	PF V	 alues	
:		MASK	: Expert Fit	Altern	ate Size	Expert	Fit : i	Alterna	te Size
:		IFC	; S		ж	: :	;		- ~
:		SCOTT	. M	:	L	:	:		
:	AV	CN US19	: M	;	L	:	- :		
1	•	Height:	177.8 ca		2. Wei	ght: 180	) lbs		C#
3	. •	Face St	ze – Adjustabi	le Metri	c Template	e Circumf	erence	•••••	
ą	•	อิบอิสลกต์:	ibular Skinfo	iø,.	•••••	•	• < • • • •	•••••	7
5	•	Bi tempo	ral Fossa - M	iniaya F	rostal Ar	- Tape	and Mai	rker ie	ei 18.8
á	•	Biprozy	qematic Mento:	1 #E - 1	itas eqsī	Marker To	ol	• • • • • •	26.5
7	•	Bi tragi	on Miniewa Fro	ontai As	c - Tape (	Only	• • • • • •	• • • •	30
3	-	Bitragio	on Fogenson A	c - Tapa	e Only	• • • • • • • •		• • • • • •	31.5
Ģ	•	Pitragi:	on Minisus Fro	ontal Ar	c - Tape !	Holder		• • • • • •	31.5
េ	•	Bitragi	en Pogenica A	rc - Tepe	s Holder .		••••	• • • • • •	., 31.5
11	•	Bizygoa	atic Diamuter	- Sprea	ding Calip	per	•••••	• • • • • •	14.3
12	-	Piprozy	gometic Diamen	ter → Sp:	reading Ca	aliper	•••••	• • • • • • •	13.1
13	•	Menton-	Sellion Diage	ler - 51:	iding Cali	iper		•••••	12.2
14	•	Sicyçom	atic Diaeeter	- Metri	c Gauge		•••••	• • • • • •	14.9
:5	•	Biprozy	gomatic Diamed	ter - Me	tric Gauge	2	••••	• • • • • •	13.7
16	•	Menton :	Sellion Diamet	ter – Mei	tric 6auge	2	• • • • • •	• • • • • •	12.6
17	•		tion of Amema			•			
			Fr 44 255 b		:				

Anti-contraction of the second se

Á	•	Name: Ri	DBERT AYSCUE		Suþja	est No.: 53	:
		S/N:	·	Sex: M Race: W	нітє	Age: 20	į
+			Assigned Mas	sk Size Category		Values	
;		MASK	Expert Fit	Alternate Size	Expert Fit	: Alternaté	Sire
i		ILC	M	S	:	:	
:		SCOTT	H	L			
:	AV	ON USIC	М	9		!	
		_		2 . We: le Metric Templat			<u>ca</u> 153
4	•	Subaand	ibular Skinfo	id		•••••	7
ຣ	•	Bitempo	ral Fos≤a - M	iniawa Frontal Ar	c - Tape and I	Marker Tosi	19,5
۴	•	Biprozy	gosatic Mente	9 Arc - Tape and	Marker Tool .		26.5
7	•	Bitragi	on Minimum Fro	cmtal Arc - Tape	Only		31.2
3	•	Bi tragi	on Pagorian A	rt - Tape Only		• • • • • • • • • • • • • • • • • • • •	33.2
¢	•	Bitragi	on Minieus fr	ontal Arc - Tape	Halder		33.2
10	٠.	Bitragi	en Pegehjer A	rc – Tape Holder	•••••	•••••	32.5
11	•	Bizygom	atic Diameter	- Spreading Cali	per		14.5
12	: •	Biprozv	çcaatıc Diama	ter – Spreading D	Caliper		13.5
:7		Henton-	Sellion Diame	ter – Sliding Cal	iper		11.7
14	•	Pizygom	atic Diameter	- Metric Gauge .			15.2
15	i .	giprosy	gomatic Diame	ter - Metric Gaug	je		14.3
íć	٠.	Menton	Sellion Diame	ter - Matric Sauq	e		12
17	•		tion of Amema	lias: 			
18	<b>;</b> .			being werst case)			

A	•	Nime: Li	EVELLE PAPILL	Subje	ect No.; S	4		
		5:N:		Sex# #	Race: Bl	LACK	Age: 2	o
+			! Assigned Ma	sk Size	Category	PF	Values	<del></del>
1		MASK	Expert Fit	: Altern	ate Size	Expert Fit	: Alternate	Siz:
:		ILC	3	:	×			
:		SCOTT		:	n			:
: :	AV	THUSIO	. M	: : 	5		•	;
1	•	Height:	177.8 cm		2. Weig	ght: 145 lbs		
3	•	Face Size - Adjustable Metric Tomplate Circumference 153						
4	-	Subwandibular Skinfold						2.5
5	•	. Bitemporal Possa - Minimum Frontal Arc - Tape and Marker Tool 17.5						17.5
÷	•	. Biprozygomatic Menton Arc - Tape and Marker Tool 25.						25.2
7	-	81tragi	on Minieus Fr	mtai er	c - Tape (	Only		27
8	•	Bitragio	on Pagantan A	rc - Tapi	e Galy	• • • • • • • • • • • • • • • • • • • •	••••••	30
ټ	-	Ritragia	so Hinimum Fr	ontal Ar	c - Tape :	Holder	• • • • • • • • • • • • • • • • • • • •	29.5
10	•	Bitragi:	en Pagenton A	rc - [ap	e Holder .			29.5
ii	-	8114698	otic Digmeter	- Sprea	ding Cali;	er	•••••	12.2
12		Biprolys	pometic Diame	ter – So	reading Ca	aljoer		11.7
::	•	menton-9	Sellion Diase	ter - 51:	iding Cali	per ,		13,3
14		grzygose	Stic Diameter	- detri	c Gauge			13,2
:5	-	Biprocy	comatic Diane	ter - Me	tric Gauge	· · · · · · · · · · · · · · · · · · ·		12.2
16	•	Menton :	Sellico Diame	ter - Mei	tric Gauge	·········	• • • • • • • • • • •	13.6
17			tion of Anowa					
ខេះ						*** * * * * * * * * * * * * * * * * * *		., -

A	. Name: Ri	ONALD ROLLO		Subje	ect No.: 55	; <b>;</b>
	은/항;	(	Sex: M Racu: W	HITE	Age: 22	
*		Assigned Ma	sk Size Category		Values	
:	MASK	Expert Fit	i Alternate Size	•	Alternate	Size
; —·	ILC	8			~~~~~	
		H	L L			
: ;	AVON USIO	: M	•		•	
·		175.3 cs	. 2 . Wej:	cht: 169 lbs		
3	. Face Si	ce - Adjustat	le Metric Templat	e Circuaferen	ce	<u>55</u> 155
4	. Submandi	ibular Skinfo	Id			10
5	. Bitempe	rai Fossa - M	inisum Frontal Ar	c – Jeba aug l	Marker Tool	18.5
÷	. Siprozy(	gomatic Mento	n Arc - Tape ano i	Marker Tool		26.5
7	. Bitrûgi	on Minieum Fr	ontal Arc - Tapo	Ocly	• • • • • • • • • • • • •	z <b>?.</b> 4
8	. Bitragi:	on ಗಿರ್ಭಾಣಕರು A	rc – Tava Only	• • • • • • • • • • • • • • • • • • • •	. ,	32.3
ç	. Bitraci:	os Minieus Fr	ontal Arc - Tage	Holder		31.5
10	Pitragi:	on Paganion A	rc - Tapa Holder	••••	- , • : - • •	31.4
1:	. Pizvoga	atic Diamater	- Spræading Cali	ger		14.4
12	. <u>D</u> agrozya	gosstic Di <b>ces</b>	ter - Spreading C	ailper		13.7
<u>:</u> :	. Mentcy-	Sellion Diame	ter - Sliding C <del>a</del> l	icer		11.3
Į.÷	. S tygem	atic Giameter	- Metric Gauce .	•••••		15.1
15	. Siprocy	gomatic Diame	ter - Metric Gauç	.e		14.5
			ter – Metric Saug			
		tion of Ansma				
		- <del>-</del>				
15	. Vomfort	0 - 8 (0	Deing werst case:	• • • • • • • • • • • •		

Ã,	Name: D	Wight Elack		·i, <b>ċ</b> •i£	est Mo.: 56	<b>&gt;</b>
	5/N:		Sex: M Race: B	LACK	Age: 21	
<del></del>	<del></del>	: Assigned Ma	sk Size Category			
•	MASK	Expert Fit	! Alternate Size	•	Alternate	Size
:	II.C	S	M :	:		
:	SCOTT	•	;	!		
: AV	/CN US10	M	: s	!		
1.	Height:	177.9 cm	2. Wei	ght: 146 lbs		
3.	Face Siz	ze – #djustab	le Detric Template	e Circumferend	ce	<u>ca</u> 126
4 .	Subeand	ibular Skinto	}&			3
5.	& tempor	rai Fossa - M	iniœum Frontal Ar	c - Tape and I	Marker Tool	19
. <b>6</b> .	Biprozyg	gomatic Mento	r Arc - Tage and :	Marker Tool	• • • • • • • • •	25.4
7.	Bitragie	on Minisus Fr	ontal Arc - Tape (	Only	•••••	27.7
ε.	Bitrag.c	on Peqonion A	rc - Tape Only		• • • • • • • • •	30.9
9.	Ritragio	cr Miniaum Fr	ontul Arc - Tape	Holder		30.1
10 .	Bitragio	on Pegenion A	ri - Tape Holder .	• • • • • • • • • • • • •		31
11 ,	Bizygom	atıs Grametar	- Spreading Cali	par	• • • • • • • • • • •	13.4
12.	Bierozvo	socatic Glace	ter - Spreading Co	aliper		12.9
13.	Menton-9	Seilion Diame	ter - Sliding Cal	iper	•••••••••	12.2
14 .	Bitygosa	atic Diameter	- Metric Sauge	• • • • • • • • • • • • •	• • • • • • • • • •	14.1
15 .	Bipr.zvg	gematic Djame	ter - Metric Gauge	2	•••••	13.4
16.	heaton S	Cellion Diame	ter - Metric Gauge	£		12.4
17.	_	tion of Hindae				
. s:	Confort	5 - 5 (0)	Seing worst wase)	•••••		

general and the second and the second

A	•	Name: Ti	Homas Grin				Subje	ect No.:	<b>57</b>
								Age:	
÷	~		Assigned Ma				₽F		
:		MASK	Expert Fit	: Altern	ate Size	7		Alterna	te Site
:		ILC	M	:	9		- ;		
•			•	•	<u>i</u>	;	•	!	
:	ÆV		i M	-		:		•	
1			180.3 cm		2 . Wei	ght; 154	lbs		<u>La</u>
3	•	Face Siz	ze – Adjustab	le Metri	c Templat	e Circumf	erend	ce	149
.3	•	Submandi	ibular Skinfo	id	• • • • • • • •	•••••	<b></b> .	• • • • • • • •	+.5
5	•	Bitempor	rel Fossa - i	inimum F	rontal Ar	rc - Tape	and i	darker To	ol 20.1
ċ	•	Biprozyg	gomatic Mento	n Arc -	Tape and	Marker To	sl	••••••	24.4
?	•	Bitragio	on Miniaum Fr	ontal Ar	c - Tape	Only	. • . • .	• • • • • • • •	30.8
3	•	Bitragio	on Pegenion ²	erc – Tap	e Only	•••••	••••		31.7
9	•	Sitragio	on Minimum Fr	ental Ar	c - Tape	Holder	• • • • •		32.5
10	•	Bitragio	on Pogenion A	erc - Tap	e Holder	•••••	• • • • •		32.2
11	-	Si zygoma	atic Diameter	- Sprea	ding Cali	per	• • • •	• • • • • • • • • • • • • • • • • • • •	., 13.5
12	•	Biprozyg	gomatic Diame	eter - Sp	reading (	Caliper	. • • • ·	• • • • • • • •	12.4
13	•	Menton-9	Sellion Diame	eter - Si	iding Cal	liper	• • • • •	• . • • • • •	11.8
14	•	Bizygoma	atic Diameter	- Metri	c Gauge .	••••••	• • • •	• • • • • • • •	:2.
iS	•	Biprozyo	qomatic Diame	iter - Me	etric Gauç	je	• • • • .		17.3
ió	•	Menton S	Sellion Drame	eter - Me	etric Sauç	je	•••	· · · · · · · · ·	12.3
17	•		tion of Anoma						
									•
18		Confort	0 - 5 (6	being wo	rst case)				

Market Belle Belle

А.	Name: Pi	ETER SASSER			Subj	iect No.:	58	
	S/N:					Age:		
<del></del>			ask Size Category !			PF Values		
: ;	MASK	Expert Fit			Expert Fit	•	e Size	
		! H		S		:		
<b>;</b>	SCOTT	: :	:	<u>.</u>		;	- ;	
: AV		: M					- :	
-		170.2 cm		2. Weig		,	4	
	. Face Size - Adjustable Metric Template Circumference 163							
4.	. Submandibular Skinfold 5							
5.	. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker [ool 17.5							
ś.	. Biprozygomatic Menton Arc - Tape and Warker Tool 26.7							
7.	Bitragio	on Miniaum Fr	ontal Are	: - Tape (	hly	••••••	. 30.1	
ξ.	Bitragio	en Pogenton Ar	c - Tape	e Úniv	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	. 32.5	
≎.	Bitragio	on Mirimum Fra	ontel Arc	: - Tape H	bolder	• • • • • • • • • •	. 32.5	
10.	Bitragio	on Pogonion Ar	-с - Таре	e Holder .	.: • • • • • • • • • •	*****	. 33	
11	Bizygom:	stil Diameter	- Spread	ding Calip	er	••••	. 14.3	
17.	Bipro:-g	pomatic Diamet	er - Spr	reading Ca	diper	••••••	. 13.5	
17.	Hentor-S	Sellion Diamet	er - Sli	ding Cali	per		. 13.2	
13.	Ri rygona	atic Diameter	- Metric	: Gauge	••••••		. 14.4	
15 .	Siprozyg	pomatic Diamet	er - Met	inic Gauge	·		. 15.2	
		Pellion Diame:						
		iion of Angmel					•	
-	 							
<del>-</del>								
18 .		0 - 5 (0 5						

A	. Namet D	ARRLY DIXON (	REPEAT)	Sub j	ect No.: 5	7				
	S/N: ~-		Sex: M Pace:	BLACK	Age: 1	7				
:		: Assigned Mas	sk Siza Category	PF	Values					
:_	MASK	Expert Fit	: Alternate Size	: Expert Fit						
:	ILC	: M	L	!						
!	SCOTT	· •	L	;	·					
; - ; -		1 M	<del>-</del>		•					
1	. Height:	173.7 cm	Z. We	eight: 180 lbs		C£.				
3-	. Face Si	ze - Adjustabi	ie Metric Templa	te Circumferen	ce	25				
4	. Subrand	ibular Skinfol	ld		•••••	7				
5	. Bitempo	ral Fossa - Mi	inimum Frontal A	erc - Tape and I	Marker Tool	19				
Ġ	. Bierezy	gomatic Mentor	Arc - Tape and	Marker Tool	. /	28.7				
7	. B: Lragi	on Minimua Fro	ontal Arc - Tapa	Only		29.3				
5	. Bitragi	en Pegenier Ar	c - Tape Only .	• • • • • • • • • • • • • • • • • • • •		33.7				
7	. Bitradi	เว Minieum Fro	ontal Arc - Tape	Holder	· · · · · · · · · · · · · · · · · · ·	72				
U	. Bitragi	or Paganiam Am	rs - Tape Holder			33.3				
ł ŧ	. Bizvgoo	atic Diameter	- Spreading Cal	iper	• • • • • • • • • • • • • • • • • • • •	14.2				
12	Biprozy	gomatic Diamet	ter - Spreading	Caliper		13.8				
3	. Menton-	Sellion Diame	tar - Sliding Ca	diper	•• ,,,,,	12.9				
Ą	. Bizygem	atic Diameter	- Metric Gauge	•••••		15.2				
9	. Biprosy	gomatic Diame	ter - Metric Gau	ge	• • • • • • • • • • • • • • • • • • • •	14.5				
ė	. Menton	Sellich Dieme	ter - Metric Gau	ge	• • • • • • • • • •	13.3				
17		tion of Anuma								
	-									
3	. Confort	9 - 5 (0.8	neing worst case	<b>.</b>		_				

A	· •	Name: DO	DNALD PALMER			Subje	ect No.: 6	o
		S/N:				HITE	Age: 2	1
+			Assigned Ma	sk Size	Category	: PF		
:		MASK	Expert Fit		! Alternate Size ! Expert !		•	Size
:		ILC		:				
:		SCOTT	: M	:	S	-	!	
;	AV	ON USIC	14	:	S			
1					-	ght: 127 lbs		
3	•	Face Siz	e – Adjultab	}€ Metri	c Templat	e Circumf <b>e</b> rend	:e	<u>⊂a</u> 130
4	•	Subsandi	bular Stinfo	ld	•••••	• • • • • • • • • • •		3
17	•	. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 18						
Ċ		Biprdiyg	gomatic Munto	n Arc -	Tape and	Marker Tool		24.2
7	•	Si čreg: c	on Miniave Fr	ental Ar	c - Tape	Only		28
6	•	Bitragio	n Paganian A	-= - Tap	e [mly	•••••	• • • • • • • • • • • • • • • • • • • •	29
ė		äxtragio	on Minimum Fr	ontal Ar	c - Tape	Holder	• • • • • • • • •	30.2
117	-	2itragio	ר Pagenion A	rc Tep	e Holder	•••••••		29
11		Bizygoma	etic Diameter	- Sprea	ding Cali	per		13.5
12	•	Piprozyg	pometic Diame	ter - Sp	reading C	aliper	• • • • • • • • • • • • • • • • • • • •	12.5
13	•	Menton-S	Selligh Diame	ter - Si	ıdıng Cal	ipe	• • • • • • • • • •	12.4
14	•	Bizygona	atic Diameter	- Metr.	c Gauge .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	14
15	•	Biprozyg	pomatic Diame	tar Ma	etric Gaug	e	• • • • • • • • •	12.9
16	•	Menton S	Sellion Diame	ter - Me	etric Gauge	e	• • • • • • • • •	12.2
17	•		ion of Anome					
16	•	Comfort	0 - 5 (0)	perud mo	rst case	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • •	

خطاعها فيواعه خعامها أمذعوا ليوالي حواسلاموا أيل البارانية العالية عواملاتها المالي المواملة المواديو

Α.	Name: I	HOMAS CRAWFOR	O (REPEA	á <b>)</b>	•	Subj∈	ect No.:	61
	S/N:	(	Sex: M	Race:	WHITE		Age:	17
:		: Assigned Mas	sk Size				Values	
:	MASK	Expert Fit	Altern		•		Alterna	te Size
:	ILC		;	Ļ	-:	-		
:	SCOTT	i in	! ! !	Ŀ	-:	- :		_ <del></del>
AV	ON USIO	: M	-		i		-	
1.	_	172.7 cm ze - Adjustab						<u>ca</u> 170
4.	Subsand	ibular Skinfo	ld			• • • •		5
5.	Bitempo	rai Fossa - M	inimum F	rontal A	rc - Tape	and !	Marker To	ol 19.
6.	Biprozy	gomatic Mento	n Arc -	Tape and	Marker To	ol .	• • • • • • •	26.
7.	Bitragi	en Minimum Fr	ontal Ar	c - Tape	Only	• • • • •	• • • • • • •	29.
9.	Bitragi	on Pogonien 4	rc - Tap	e Only .	• • • • • • • • • •		• • • • • • •	33
9.	Bitragı	on Miniawa Fr	ontal Ar	c - Tape	Holder			32
10.	Bitragi	on Pegenien A	rc - Tap	e Holder		• • • • •		33
11.	Bicygom	atic Diameter	- Sprea	eding Cal	iper	••••		13.
12.	Biprozy	gomatic Diame	ter - Sp	oreading	Caliper		• • • • • • •	12.
13.	Menton-	Sellion Diame	ter - Sl	liding Ca	liper	••••		12.
14 .	Bizygom	atic Diameter	- Metri	c Sauge	••••••	••••		14.
15 .	Biprozy	gematic Diame	ter - Me	etric Gau	:3e	••••	,	13.
16.	Henton	Sellion Diame	ter - Me	etric Gau	ıg€	• • • •		12.
17 .		ition of Anema						
								- - -
18.		. 0 - 5 (0						- 

A	•	Name: Ri	CKY RAYBURN	(REPEAT)	Subje	ect No.: 62						
	S/N: Sex: M Race: WHITE Age: 29											
:			Assigned Ma	sk Size Sategory	PF							
;		Mask i	Expert Fit	Alternate Size			Size :					
:		ILC	S	n			:					
:		SCOTT	M	S								
;	AV	AVON US10 : S i M i :										
1	•	Height:	182.9 cm	2. Weig	;:t: 195 lb∈							
3		Face Siz	re - Adjustab)	le Metric Template	2 Circumferen	ce	<u>ca</u> 155					
4	•	<u> ಆಗಾಸ್ಕಾರ</u>	bular Skinfo	ld		• • • • • • • • • •	5					
5	•	Si temper	ral Fossa - M	inimum Frontal Arc	- Tape and (	Marker Tool	18					
క	•	Sir.ozyg	pomatic Mento	Arc - Tape and 1	farker Tool .		25					
7	•	Bitragio	an Minimum Fro	ental Arc - Tape (	Coly	• • • • • • • • • •	29.5					
8	-	Bitragio	on Begenten A	c - Tape Only	• • • • • • • • • • • •	• • • • • • •	31.4					
9	•	Bitragio	an Kicimum Fro	ontal Arc - Tape H	Holder	••••••	31.2					
10	-	Bitragio	in Poyonier A	rc - Tage Holder .	• • • • • • • • • • • • •	• • • • • • • • • • •	30.4					
11	•	Bizygoza	atic Diameter	- Spreading Cali	per	• • • • • • • • • •	14.1					
12	•	Biprosyg	posatic Diame	ter - Spreading Ca	aliper	• • • • • • • • • •	12.5					
13	•	Menton-S	Sellion Diace	ter - Sliding Cali	per		12					
14	•	gr sådoæ	etic Diameter	- Metric Gauge	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • •	14.5					
15	•	Siproxy	gomatic Diame	ter - Metric Gaug	2	•••••	13					
ís	•	Menton S	Sellion Diame	ter - Metric Saug	?	• • • • • • • • • •	12.2					
17	•		tien of Anoma									
18	•	Confort	9 - 5 (0)	peing worst case)	•••••	• • • • • • • • • • •						

THE RESIDENCE AND A STATE OF THE PROPERTY OF T

A	A . Name: DENNIS PRIEST (REPEAT)					ect <b>No.: 6</b> 3	
		S/N:		Sex: M Race: Wi	HITE	Age: 19	ı
÷.			Assigned Mas	sk Size Category	: PF		<del></del>
:	:	MASK	Expert Fit	Alternate Size	•	-	Size :
:		ILC		М			:
:		SCOTT	M	s s	•		;
:	AV	ON US10		S		-	: :
		_		2 . Weig			<u>ca</u> 159
				ie Metric Templat: ld			4
							19.5
		_		inimum Frental Arg			24.2
	•			n Arc - Tape and I			
		-		ontal Arc - Tapa (			30.2
	•	-	-	rc - Tape Only			32
3	•	Bitragio	on Minieum Fr	ontal Arc - Tape !	Holder	* < * < * < * * * * * * * * * * * * * *	22
ţĢ	•	Bitragio	on Pogenien A	rc - Tape Holder	••••••••	• • • • • • • • • • • • • • • • • • • •	31.5
11	•	Birygon	etic Diameter	- Spreading Cali	bai		14.2
12	•	Riprozy	gomatic Diame	ter – Spresding C	eliper		13.5
13	•	Menton-	Sellion Diame	ter - Sliding Cal	ile	••••	12.2
12	•	Bizygom	atic Diameter	- Metric Gauge .	••••••		15. i
13		Biprozv	gomatic Olame	ter - Metric Gaug	e	,	14.4
14	•	Menton (	Sellion Diame	ter - Metric Saug	e		12.6
17	•		tion of Anoma				
18		Confort	0 - 5 - 60	being worst case)	•••••		

Ą	A . Name: PATRICK JOHNSON (REPEAT) Subject No.: 64									
		S/N:		Sex: M	Kate: W	HITZ		₽åē:	19	
:	-	<del></del>	Assigned Ma	sk Size	Cateçory	† †	FF '	Values		
•		MASK	Expert Fit	: Altern	ate Size	: Expert	Fit :	Alterna	te Size	
:		ILC	S	1	×		- :			
		SCOTT ! S : 7 : :								
: :	AV	ON USIO		-	М	!	- :			
1	•	Height:	177.8 cm		2. Wei	ght: 151	lbs			
3	•	Face Siz	:e - Adjustab	le Metri	c Template	e Circuaf	erenc	e	<u>ca</u>	
4	•	Subsandi	bular Skinfo	ld	• • • • • • • • •	• • • • • • • •	• • • • •	• • • • • • •	3	
5	٠	Bitespor	al Fossa - M	iniaus F	rental Ar	c - Tape	ತಾರೆ ಗೇ	arker To	ol 18.4	
5	•	Biprozyg	pomatic Mento	n Arc -	Tase end :	Karler To	ol		25.5	
7		Bitragi:	on Minimum Fr	ental Ar	r - Tage	Only		• • • • • • •	28.7	
3	•	Bitragio	an Pogentes- A	rc - Tap	e Griv	•.•			31.9	
Ç	•	Bitragio	an Mini <del>su</del> a Fr	ontal Ar	c - Tape:	∺c:der .			30.6	
10	•	Bitragio	n Pegonion A	rc – Tap	e Holder			• • • • • • •	31.5	
11	•	Bizygoza	etic Diameter	- Sprea	ding Fali	per	• • • • •		13,6	
12		Biprezyg	pmatic Diame	ter - Sp	rrasıng S	eliper		+	17.1	
:3	•	Menton-S	eliien Diase	ter - Sì	iding Cal:	iper			12.5	
			utic Diameter							
			powetic Dieme							
			elison Diacy							
:7	•	Observat	::cn ಈ ಈಗಲ್ಲ	lies:						
19	•		0 - 5							

A. Na	ae: KARTIN SIMON	S (REPEAT)	Subje	ect Mo.: 65	į	
S/	V:	Sex: M Race: W	HITE	Age: 18	<b>;</b>	
:	Assigned	Mask Size Category	: PF	Values		
MAS	<pre>Expert F1</pre>	t : Alternate Size	•	Aitermate	Size :	
ILC	S	; <del>N</del>		,	:	
SCO	SCOTT : S : M : :					
AVON	USIC : M	: S		•		
1 . He	ight: 180.3 cm	2. Wei	ght: 159 lbs			
J. Fa	ce Size - Adjust	able Metric Templat	e Circusfereno	ce	<u>ce</u> 142	
4 . 50	b <b>mandibula</b> r Skin	fold	••••••	••••••	3	
5. 31	temporal Fossa -	Miniaua Frontal Ar	c - Tape and I	Marker Tool	19.2	
6 . Ei	prozygomatic Men	ton Arc - Tape and	Marker Tool	• • • , • • • • • •	25.5	
7. 8i	tragio: Minimum:	Frental Arc - Tapa	Only	• • • • • • • • • •	30.2	
8. 3.	tragion Pogonion	Arc - Tape Only	••••••		32	
9. 31	tragion Minimum	Frontal Arc - Tape	Holder	• • • • • • • • • •	32.5	
10 . 81	tragion Pegenion	Arc - Tape Holder	•••••	• • • • • • • • • •	32	
11 . Bi	zygematic Diamet	er - Spreading Cali	per	• • • • • • • • • •	13.4	
12 . Bi	prozvgepatic Dia	meter - Spreading (	Cliper	• • • • • • • • • • • • • • • • • • • •	12.3	
13 , Me	nton-Sellion Dia	meter - Sliding Cal	iper		12.7	
14 . Di	cygomatic Diamet	er - Metric Gauge .	•••••		14	
15 . 21	prosvopatic Dia	weter - Metric Sauq	j <u>s</u>		12.8	
16 . re	nton Sellion Dia	eeter - Netric Gauç	Je		12.4	
	servation of Anc					
:8. Ca	afort 0 - 5	( being worst case)				

BY THE BEAT OF THE PROPERTY OF

A . Name: (	GEORGE MURRAY	(REPEAT)		Su	bject N	9.: 6ê	ċ
S/N: -		Sex: M	Race: 5	<b>LACK</b>	A	<b>çe:</b> 21	i
;	Assigned M			:		es	
MASK	: Expert Fit	=		•		ernate	512e
: ILC	: M	:		:			
SCOTT		-	5	:	;		
: AVON US10	i m	-		:	-		
1 . Height:	: 165.4 cm		2. Wei	ght: 165 l	bs		
3. Face S	ize – Adjustal	ole Metri	c fesplat	e Circuxfer	ence		<u>ca</u> 163
4 . Submand	dibular Skinfo	old		• • • • • • • • •			5
3. Bitempe	orai Fossa - i	പ്പാദ്യം E	rental Ar	c – Tape an	d Marke	r Tool	19.2
6. Biproz	ygomatic Mento	on Art -	Tape and	Marker Tool			27.3
7. Bitrag	ion Minimum F	rontal Ar	c - Tape	Only	- · · · · · ·	• • • • •	29.6
8 . Bitrag	ion Pogenion a	Arc - Tap	e Only	• • • • • • • • • • • • • • • • • • • •			32.3
9. Bitrag	ion Miniaga Fi	rontal Ar	c - Tape	Holder			31.5
10 . Bitreg	ion Pogonion :	÷rc − Tap	e Holder		•••••		3:.3
11 . Bizvgo	satic Diamete	r – Sprea	iding Cəli	per			14.2
12 . Biproz	ygematic Diam	eter - Sp	reading C	aliper			17.6
13 . Menton	-Sellion Diam	eter - Si	ising Cal	iper			12.1
14 . Bizyes	patic Diamete	Metri	c Gauge .	• • • • • • • • • • • • • • • • • • • •	• • • • • •		14.9
15 . Biscoz	yggmatic Diam	et <i>er -</i> He	etric Gaug	e	1		:3.5
ló . Menton	Sellion Diam	eter – <b>r</b> e	itric Saug	e			13.2
	ation of Anec						
18 . Comfor	t 0-5 ()	being wo	rst case)		•••••		

AND THE PROPERTY OF THE PROPER

A . Nas	e: ROI	NALD EPPS (R	EPEAT)	ال عندة ا	ect No.: 6?	
S/N	l <b>:</b>	<del></del> !	Sex: M Race: B	LACX	Age: 22	
÷	:	Assigned Ma	sk Size Category	: PF	Values	
MASK	i '	Expert Fit	Alternate Size	•	Alternate	Size
ILC		M	L			
SCOT	1	ř	L:			
AVON U	S10 :	ĸ			<u> </u>	
1 . Hei	ght:	180.3 ca	3. ₩ei	ght: 206 its		
3. Fac	e Siz	e - Adjustab	le Metric Templet	e Circumferen	te	205
4 . Sub	nandil	bular Skinfo	ld	,		5
5 . Bit	esper	al Fossa - M	inicua Frontal Ar	rc - Tape and	Marker Tool	19.5
S. Big	cosyg	osatic Mento	n Arc - Tape and	Marker Tool .	•••••	30
7. Bit	ragio	n Miniœus Fr	ortal Arc - Tage	Gally	,,,,,,,,,,,	30.5
e. Bit	ragie	n Paganian A	rc – Tape Only			35.1
9 . Bit	ragio	n diniaus Fr	ontal Arc - Tape	Holder	• • • • • • • • •	32.5
10 . Bit	ragio	n Paganian A	rc - Tape Holder			<b>35.</b> 3
11 . Biz	: YGOM3	tic Dia <b>cete</b> r	- Spreading Cali	per		14.6
12 . Biş	orozyg	ceatic Diame	ter – Spreading (	Caliper		:3,5
i3 , Mer	nten-S	ellion Diage	ter - Sliding Cal	liper		15.4
14 . Bis	zygcaa	tic Diameter	- Metric Gauge	• 4 4 7 • • 7 • • • • •	• • • • • • • • • • • • • • • • • • • •	14.5
15 . Big	acasyā	omatic Diame	eter - Metric Gaus	je		15.7
16 . Mer	nten S	ellion Diame	ter - Metric Gau	]e	.,,	14.4
		ion of Anoma				
		_				
19 . Ca	afort	v - 5 (0	being ≈orst case		• • • • • • • • • • •	

A	•	Name: A	NTHONY BALAUS	ers (rey	EAT)	s	ub j <b>e</b> ct	Ho.:	68
		8/X:		Sex: N	Race: B	LACK		Age:	20
:			Assigned M	ask Size	Category	!	PF Values		
:		MASK :	Expert Fit	: biter:	ate Size	i Expert F	it : A	lterna	te Size
į		ILC	H	:	Ł	1		~	
;		SCOTT			M.		:		
3	ΩV	US10	L	1	H	1	; i		
i	•	Height:	185.4 ca		2, Wei	ght: 179	) bs		
3	•	Fage Siz	e – Adjusta:	ole Metra	c ïemplat	a Circuafe	rence		<u>53</u> 294
4	•	Subsendi	ibular Skinfe	eid	• • • • • • • • •		• • •		5
5	-	Bitespor	ral Fossa - i	Miniqua f	rontal fr	s — Ta <u>¢</u> ≘ a:	nd Mar	ker To	oì 20.4
Ġ	•	Siprozyą	comatic Ments	on fore -	Taps and	reker Too	i		29.5
7	•	8: tragic	en Miniaua Fr	rostal A	c - Tape	Day	• • • • •	• 2 • • • •	52.4
8	-	Bitragio	on Pagantian i	ere - Tag	æ Oml,				35.5
3	-	Bitraçio	er dictions fo	rontal Ar	rc - <u>Tok</u> e	kalder	• • • • •		34.5
10	•	Bitragio	on Fügenter (	Gra - Tep	e Holder		• • ; =		32.4
11	•	Bi <b>Zygo</b> m∈	etic Dresster	- Sprea	eding Çali	per	• • • • •		i4,3
12	-	Biprosyg	jomatic Diame	ster - Sp	ಗಳಿಸಬೇಕ್ E	alig <del>e</del> t			:3.7
13		Menton-S	Sellion Niasa	iter - 51	iding Cal	ioz	• • • • • •	. • • • • • •	14.1
Įġ	-	Bizygoma	atic Diaseter	- Metri	: 9&uge .	• • • • • • • •		~	15.2
15	•	Biprozyg	gomatic Diace	eter - ise	etrit Gaug	e	<i></i> .	•••••	14,4
16	2	fienton S	Sellion Diame	eter - Me	trıc 8æug	8			14.3
17	•		ion of Amesa						
		~							
រត្	•	Confort	0 - 5 (0	perud mo	est case:	•••••	••••		

received the second and the second a

A	•	Name: M	ICHAEL WRIGHT	(REPEAT	)		Subje	ect No.:	69
		S/N:		Sex: M	Race: B	LACK		Age:	18
÷			Assigned Ma					Values	
; ;		Mask	Expert Fit	: Alterr		Expert	•	Alterna	te Size
;		IFC :	S		M	;			
:		SCOTT	'n	:	L	;			
:	AV	ON US10	M	:	S		:		
1	•	Height:	192.2 ca		2. Weig	ght: 168	lbs		
3	. •	Face Siz	e – Adjustah	le Motri	c Template	e Circust	erenc	e	<u>ce</u> 145
4	•	Subsandi	bular Skinfo	Id			· • • • •		4
5	•	Ditempor	al Fossa - M	intews F	rontal Ar	c - Tape	ಕಣಕ ಕ	farker Te	ol 19.3
÷	•	Biprozyg	josetic Mento	n Art -	Tape and i	Marker To	el	• • • • • • • •	25
7	•	Bitragio	n Biniaus Fo	catal Ar	s - Tape i	Gnly			30.2
ខ	•	Bitragio	m Pegenian A	rc - Tap	e Gura 🗥		••••	• • • • • • • •	32
ş	•	Bilregio	n Minimum Fr	cntal Ar	c - Tape!	Holder			32.5
٤٠.	•	Bitragio	n Pogenien A	rc - Tap	e Holder .		• • • • •	• • • • • • • • •	32
11	•	Bizygone	stic Diameter	- Sprea	Ging Cali	ser	• • • • •		14.5
12	•	Biprozyg	posatic Diame	ter - Sp	reading C	aliçer	• • • • •		13.2
13	•	∺enton-§	Sellion Diame	ter - 51	iding Cal	iper			13
14	•	Sizygose	stic Diameter	- Metri	c gende .	••••	· • • • •		14.9
15	•	Biprozyg	gomatic Diame	ter - Ma	tric Saug	e			13.6
15	-	deviton S	Sellion Dia <del>me</del>	ter - <del>Ne</del>	trjc Gaug	P,		• • • • • • • •	12.4
17	•		ion of Anoma						
:8	•	Confort	6-5 (0	being wo	ret case)			•••••	

A.	Nace: Bi	RUCE MACKEY (	REPEAT)	Subj	ect No.: 70	0
	5/N:		Sey: M Race: Si	LACK	Age: 18	3
<u> </u>		Assigned Ma	sk Size Category	PF	Values	
:	MASK	Expert Fit	Alternate Size			Size
;	IC	K	S			
:·	SCOTT	М	5			
; Ai	/CH US10 :	М .	S			
1.	Height:	182.9 cm	2. Weig	ght: 187 lbs		
3 .	Face Siz	e - Adjustab)	le Metric Template	e Circusferenc	e	<u>ca</u> 155
4.	Subsandi	bular Skinfo	i¢	• • • • • • • • • • • • • •	*******	4
5.	Bitespor	al Possa - M	irimum Frontal Arc	- Tape and I	farker Tool	19.6
ś.	Biprozyg	omatic Mentor	n Arc - Tape and A	farker Tool	• • • • • • • • •	26.2
7.	Pitragio	ภ Minimum Fro	ontal Arc - Tape (	Only	•••••	29.6
8.	8itragio	an Pegonion Ar	c - Tage Only		•••••	32.1
9.	2it: agid	n Minimum Fro	ontal Arc – Tage H	alder	• • • • • • • • • •	31.2
10.	Ritragio	n Pagenion A	c - Tape Holder .	• • • • • • • • • • • • • • • • • • • •	**143****	31
11.	Bizygosa	itic Diameter	- Spræading Calip	er		13.7
12 -	ĝi prozyg	omatic Diamet	er – Spreading Ca	aliper	• • • • • • • • •	13.2
13.	Menton-9	ellion Diamet	ær - Sliðing Cali	.per		12.1
14 .	Sicygosa	tic Diameter	- Metric Gauge	••••••	• • • • • • • • • •	14.4
15.	giprosvē	pestic Diacet	.er - Metric Gauge	· · · · · · · · · · · · · · · · · · ·		13.6
ić.	henton S	ellich Diamet	er - Metric Gauge	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	12.8
17.	übservat	ion of Rowmal	125:			
18.			eing worst case)			

A	. 1	da <b>ne:</b> Ri	D <b>ONÉ</b> Y POPPLEW	ELL		Subja	ect No.: 71		
	9	5/N:		Sex: M	Race: W	HITE	Age: 19	,	
+			Assigned Ma	sk Size	Category	PF	PF Values		
:	W	SK.	Expert Fit	Altern	ate Size	Expert Fit	Alternate	Size	
1	ΙĽ	.C	; : S	; !	Ħ				
•	SC	:0TT	L	;	H .				
:	AYON	US10	: K	; !	L				
		-	177.8 cm ze – Adjustab			ght: 160 lös e Circumferend	e	<u>ca</u> 165	
Ę	. 9	Subaand	ibular Skinfo	ld	•••••	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	5	
5	. E	Bitempo	rel Fossa - M	iniqua F	rontal Arc	c - Tape and I	Marker Tool	18.6	
6	. E	Siprozy	gomatic Mento	n Arc -	Tape and I	Marker Tool	• • • • • • • • • • • • • • • • • • • •	27	
7	. E	Bitragi:	on Minique Fr	ontal Ar	c - Tape (	Only	•••••	30	
3	. 5	Sitragio	on Paganian A	rc - Tap	e Only	••••••		32	
9	. E	Bitragi:	on Niciaum Fr	ontal Ar	c - Tape i	Holder	• • • • • • • • • •	31.5	
Ō	. 5	:itragi	on Paganian A	rc - Tap	e Holder	• • • • • • • • • • • •		32.5	
1	. 8	grzygom	atic Diameter	- Sprea	ding Cali	pe:	• • • • • • • • •	14.2	
2	. 8	Siprozy	gematic Diame	ter - Sp	reading C	alip <del>e</del> r	• • • • • • • • •	13.4	
3	. 1	!enton-!	Sellion Diame	ter - 51	iding Cal	iper	• • • • • • • • • •	12.9	
4	. 8	Bizygom	atic Diameter	- Metri	c Sauge .	••••••	• • • • 2 • • • • • •	14.5	
5	. 5	Bi prozy:	genatic Diame	ter - Me	etric Gauge	e	• • • • • • • • •	13.6	
5	. ?	1enton	Sellion Diame	cer - Me	etric Gaug	e		12.9	
7	. •		tion of Ancae						
-			0 - 5 10						

A . Na	me: M	ICHAEL FORD	(REPEAT)		وَ رَحِيدَ	ect No.: 7	72
<b>S/</b>	N:		Sex: M	Race: Bl	_ACK	Age: 2	20
+		Assigned Ma	esk Size	Category	PF	Values	
MASI	κ	Expert Fit	: Altern	ate Size	Expert Fit	#lternate	Size
ILC		М	;	S			
SCO	11	,	:	L			
: AVON	US10	M	: :	5			
1. He:	ight:	172.7 ⊆m		2. Weig	ght: 164 lbs		
3 . Fa	ce Sia	ze – Adjustab	ole Metri	c Template	s Circumferenc	:e	<u>5m</u> 162
4 . Sul	baendi	ibular Skinfo	eld	•••••			5
5 . Bi	terpcı	ral Fossa - M	dinimum F	rontal Arc	- Tape and :	arker Tool	14.5
ó. Bij	orozyg	gomatic Mento	on Arc -	Tape and h	Marker Tooi		<b>27.</b> 3
7. Bit	tragio	on Minimum Fr	cntal Ar	c - Tape (	Bnly		29.6
s. 83	tragio	on Pegonien A	Arc - Tap	e Coly	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	32.7
s. pi	tragio	อก ศัเกเลยต Fr	contal Ar	c - Isbe .	dolder		32,3
10 . Bis	tragio	on Peganian A	erc - Tap	e Holder .			32.1
11 . Bi:	: Ağoma	atic Diameter	- Sprea	ding Calış	er		14.1
12 . Big	orozyg	gematic Diame	eter - Sp	reading Ca	·liper		13.3
13 . Mer	nton-S	Sellion Diame	eter - 31	iding Cali	per		12.9
14 . Biz	ygona	atic Diameter	- Metri	c Gauge	•		14.8
15 . Biş	orozyg	gomatic Diame	eter - Me	etric Gauge	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • •	13.8
16 . Mer	nton S	Sellion Diame	eter - Me	tric Gauge	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	12.7
		tion of Anoma					
18 . ::»:	rort	0-5 (0	being wo	rst case)			

week of 1/25/9; week of 2/1/80 -No Subsects

A . Name: ALLEN CASANOVA

Subject No.: 73

5/4:	on the service of the							
	Assigned Mas	sk Size Category		Values				
MASK	Expert Fit	Alternate Siza	Expert Fit		Size			
ILC	S	М	3 I	:				
SCOTT	\$	М	:					
AVON US10	5	М	; <del></del> ;	! !				
. Height:	67 cm	2. Weig	ght: 145 lbs		•			
. Face Siz	ze – Adjustabl	ie Metric Template	e Circumferend	e	<u>cm</u> 135			
. Submardi	bular Skinfol	.d	. • • • • • • • • • • •	• • • • • • • • • •	2			
. Bitempor	al Fossa - Mi	nimum Frontal Arc	c - Tape and h	Marker Tool	19			
. Biprozygomatic Menton Arc - Tape and Marker Tool 2								
. Bitragio	. Bitragion Minimum Frontal Arc - Tape Only 2							
. Bitragio	on Paganian Ar	c - Tape Only	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	31.3			
. Sitragio	on Minimum Fro	ental Arc - Tape )	Holder	• • • • • • • • • • • • • • • • • • • •	32.5			
. Bitragio	an Pogonion Ar	c - Tape Holder .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • •	31.5			
. Bizygoma	stic Diameter	- Spreading Cair	gr	• • • • • • • • • • •	14.0			
. Biprozyg	gomatic Diame	ter - Spreading Ca	eliper		13.7			
. Menton-S	Sellion Diame	ter - Sliding Cal	per		11.5			
. Bizygema	atic Diameter	- Metric Gauge	: • • • • • • • • • • •		15.1			
. Biprozyo	gomatic Diame	cer - Metric Gauge	2	• • • • • • • • • • • • • • • • • • • •	14			
. Menter 9	Sellion Diamet	ter – Metric Gauge	3		11.5			
. Observation of Anomalies:								
	MASK  ILC  SCOTT  AVON USIO  Height: Face Siz Submardi Bitempor Biprozyo Bitragio Bi	Assigned Massigned Massigned Massigned Massigned Massigned Massigned Massigned Expert Fit  ILC	Assigned Mask Size Category MASK   Expert Fit   Alternate Size ILC   S   M SCOTT   S   M AVON US10   S   M  Height: 67 cm   2 . Weight: 67 cm   5 . M  Bitemporal Fossa - Minimum Frontal Arc   Biprozygomatic Menton Arc - Tape and in the Bitragion Minimum Frontal Arc - Tape in Bitragion Minimum Frontal Arc - Tape in Bitragion Minimum Frontal Arc - Tape in Bitragion Pogonion Arc - Tape in Bitragion Pogonion Arc - Tape in Bitragion Pogonion Arc - Tape Holder   Bitragion Fogonion Arc - Tape Holder   Bitragion Fogonion Arc - Tape Holder   Bitragion Fogonion Bitragion Fogonion Arc - Tape Holder   Bitragion Fogonion Bitragion California Bitragion Bitragion Diameter - Spreading California Bitragion Diameter - Spreading California Bitragion Diameter - Metric Gauge   Bitragygomatic Diameter   Metr	Assigned Mask Size Category   PF	S/N: Sex; M Race: WHITE Age: 21    Assigned Mask Size Category   PF Values     MASK   Expert Fit   Alternate Size   Expert Fit   Alternate     ILC   S			

0 - 5 (0 being worst case) .....

A	•	Name: El	OWARD STARKEY			S	Bubject	No.:	74
		5/N:		Sex: M	Race: Bl	LACK		Age:	22
;			Assigned Ma	sk Size		; ; !	PF Va	lues	
;		MASK	Expert Fit	: Altern		•	_	lternat	e Size
*		ILC	М	:	S		- :		
		COTT	s	!	м	:			
:	AV	ON U519	•	;		:	- ;		
1	•	Height:	<b>68 cm</b>		2. Wei	ght: 158	lbs		
3	•	Face Siz	e - Adjustab	le Metri	c Template	e Circuafe	erence		<u>em</u> 145
4	•	Submandi	bular Skinfo	id	• • • • • • • • • • • • • • • • • • •	• • • • • • • • • •		~ · · · · ·	3
5	•	3i tempor	ral Fossa - M	inimum F	rontal Ar	c - Tape a	and Mar	ker Too	01 20.3
ó	•	Bierozyo	jomatic Mento	n Arc - '	Tape and i	Marker Top	al	• • • • • •	25.2
7	•	Bitragio	on Miniaum Fr	ontal Ar	c - Tape !	Daly			30.5
8		Bitragio	on Peganian A	rc - Tap	e Only	*******	•••••		31
9	•	Bitragio	on Minimum Fr	ontal Ar	c - Tape !	Holder			33
10	•	Bitragio	on Paganian A	rc - Tap	e Holder	• • • • • • • • • •			31.2
<u>:</u> 1	•	Bizygona	atic Diameter	- Sprea	ding Cali	per · · · · ·		,	13.9
12	•	Biprozyg	gomatic Diame	ter - Sp	reading C	aliper	• • • • • •		13.4
13	•	Menton-S	Sellion Diame	ter - 51	iding Cal	iper		· · · · · ·	13.1
14		B: zygoma	aic Diameter	- Metri	c Gauge	• • • • • • • • •	••••		14.3
15		8iprozy(	gomatic Diane	ter - Me	tris Gaug	e	• • • • • •		13.7
16	•	Merton S	Bellich Diame	ter - Me	tric Gaug	e			12,8
17	•		tion of Anoma						
18		Comtort	0 - 5 (0)	being wo	rst case)	•••••			

) معقوطین البدر میشورندو مین خید کنیو هنگانجه زمیل ایش البدر البدر البدر البدر البدر البدر البدر البدر البدر الب

A	•	Name: Di	NAYNE POTOKA		Subje	ect Ng.: 75	5		
		S/N:		Sex: M Race: ₩	HITE	Age: 25	5		
:			 L Assigned Ma	sk Size Category		PF Values			
:		MASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size		
:		ILC	S	M					
•		SCOTT : M : S :							
	ĄV	AVON US10   S   M							
		_	69 cm		:: 160 lbs		CA		
	•			ie Metric Template			155		
4	•		•	ld			3		
5	•	Bitempor	raì Fossa - Mi	iniaum Frontal Arc	- Tape and I	Marker Youl			
6	•	Biprozyo	gomatic Mento	n Arc - Tape and M	farker Tool	• • • • • • • • • • •	´ .5		
7	•	Bitragio	on Minimum Fro	ontal Arc - Tape (	Baly	• • • • • • • • • •	30.3		
ន	-	Bitragio	on Pogonion A	rc – Tape Only	• • • • • • • • • • • • •	• • • • • • • • • •	32.2		
7	•	Bitragio	on Miniswa Fr	ontal Arc - Tape H	Holder	•••••	32.3		
10	•	Bitragio	on Paganten A	rc - Tape Holder .	• • • • • • • • • • • • •	• • • • • • • • •	32.4		
11	•	Bizygom	atic Diameter	- Spreading Calip	oer	• • • • • • • • • • •	14.2		
12	•	Bigroz	gom <u>a</u> tic Diame	ter - Spreadin _{s .}	aliper	• • • • • • • • • • • • • • • • • • • •	13.7		
13	-	Menton-9	Sellion Diame	ter - Sliding Cali	iper	•••••	12.7		
14	•	Bizygon	tic Diameter	- Metric Gauge	• • • • • • • • • • • •	• • • • • • • • • •	14.6		
15	•	Brbcoski	gomatic Diame	ter - Metric Gauge	₽		14		
16	•	m≥nton 9	Sellion Diame	ter - Metric Gauge	2	• • • • • • • • • • • •	13		
17	-	Gbserva	tion of Anoma	lies:					
					******				
18				being wc-st case)					

A		Name: M	ATUTE		Subje	ect No.: 76	>
		S/N:		Sex: M Raca: %	HITE/SPANISH	Age: 35	į
:	<b></b>		Assigned Ma	sk Size Category	: PF	Values	
:		MASK	Expert Fit	Expert Fit	Alternate	Size	
:		ILC   M   S					
		SCOTT	М	S	:		
:	AV	AVON US10 : M : S : :					
1	•	Height:	68 ca	2. Wei	ght: 140 lbs		
3	•	Face Siz	ze – Adjustab	le Metric Templat	e Circumferend	I	<u>CE</u> 167
4	•	Submandi	ibular Skinfo	id	•••••	••••••	4.5
5	•	Bitempor	ral Fossa - M	inisum Frontal Ar	c - Tape and i	farker Tool	18.7
6	•	Biprozyg	gomatic Mento	n Arc – Tape and	Marker Tool		26.5
7	•	Bitragio	on Miniaum Fr	ontal Arc - Tape	Only	• • • • • • • • • • • • • • • • • • • •	29.8
8	•	Sitragio	an Pogenion Ar	rc - Tape Only	••••••	••••••	30.5
7	-	Bitragio	on Minimum Fro	ontal Arc - Tape	Holder	• • • • • • • • • • • •	31.5
10	-	Bitragio	en Pogenien A	rc - Tape Howier	•••••••	•••••	30.5
11	-	Sizygosa	etic Diameter	- Spreading Cal:	per	• • • • • • • • • •	13
12	•	Biprozyg	posatic Diamed	ter - Spreading C	al:per		17.4
13	•	Menton-9	Sellion Dia <del>se</del>	ter - Sliding Cal	iper		12.9
14	-	Bizygosa	itic Diameter	- Metric Sauge .	•••••••	•••••	14.5
15	•	Biprotyg	gomatic Diame	ter - Metric Gaug	e		13.8
iò	-	Menton S	Sellion Diage	ter - Metric Gaug	ë	•••••	13.2
17	•		ion of Anomal				
18		Confort	0 - 5 (0 5	eing worst case)	•••••	••••••	

was a series of the series of

2	•	Name: M	ICHAEL WILLIA	Subje	Subject No.: 77					
		9/N:	•	Sex: M	Rase: S	LACK	Agë: 2	22		
÷		!	Assigned Mag	sk Size	Category	: PF	Values			
:		MASK	Expert Fit	Altern	ate Size	Expert Fit	Alternati	≥ S1ze		
:		ILC	М	: :	S	;	;			
			М	:	L		:	_		
;		'SN US10	•	: :	L	<u> </u>	:	_		
3	•	Height:	72 ca		2. Wei	ght: 180 lbs				
3	•	Face Si:	ce - Adjustab	le Metri	c Template	e Circu <del>stere</del> n	ce	. 170		
æ	•	:besadu2	ıbular Skinfo	ld		• • • • • • • • • • • • •	• • • • • • • • •	. 4		
5	•	Sitespo	ral Fossa - M	iniawa F	rontal Ar	c - Tape and I	Marker Too	1 20.5		
6	•	Biprozy	gomatic Mente	n Arc -	Tape and I	Marker Tool .	• • • • • • • • •	. 27.6		
7	•	Bitraga	on Miniaus Fr	ontal Ar	c - Tape	Gnly	• • • • • • • • •	. 31.6		
8	•	Bitragio	on Pegenian A	rs - Tap	e Saly	• • • • • • • • • • • •		. 33.1		
9	•	Bitragio	on Minipum Fr	ontal Ar	c - Tape	Holder		. 33.5		
10	•	Bitragi	er Pogonien A	r Tap	e Holder	• • • • • • • • • • • •	• • • • • • • • •	. 33.5		
11	•	Bizygee	stic Diameter	- Sprea	ding Cali	per	;	. 14.2		
12	•	Piprozv	gomatic Dia <del>se</del>	ter - Sp	reading C	aliper	••••••	. 13.6		
13	•	Menten-	Sellion Diame	ter - Si	iding Cal	iper		. 13.3		
<b>!</b> 4	-	Sizygoai	atic Diameter	- Metri	c Gauge .	• • • • • • • • • • • •		. 14.7		
15	•	Biprozy	gematic Diame	ter - Me	etric Gaug	e		. 14.3		
15	•	. Menton Sailion Diameter - Metric Gauçe								
ĮŦ	•		tion of Ameda							
		_	<u>-</u>							
18		Confort	0 - 5 (9)	beina wa	rst case)	•••••				

CHARA INTERPRETARION NOT NOT SOLVE S

A	•	Name: Si	ÆZ ROSARIO			ازىنىد	ect No.:	78
		S/N:		Sex: M Rac	e: WH	ITE	Hge:	2 <del>9</del>
•			Assigned Has	sk Size Category : PF Values				
:	i	Mask _	Expert Fit	Alternate S	ize :	Expert Fit	Alternat	e Size
•		ILC	М	L	:			_
:		SCOTT	M	L	 :			_
i ·	AV	ON US10	М	L	; :			_
i	•	Height:	68 ca	2.	Weig	ht: 179 lbs		<u>Cs</u>
2	•	Face Si:	e – Adjustab	le Metric Tea	7ø1≥te	Circumferen	ce	. 178
ş	•	Subaaadi	bular Skinfo	d	• • • • •		· · · · · · · · · ·	. 7
5	•	Ei teapor	ral Fossa - M	inisum Front	al Arc	- Tape and	Marker Too	1 21.5
÷	•	Biprozyg	gosatii Mento	n Arc - Tape	ನಾರ ಕ	iarker Tool .	• • • • • • • • •	. 27.8
7	-	Bitragio	an Minicua Fr	ental Arc - 1	Tape 0	hly		. 32.2
3	•	Bitragio	on Pagorion A	rc - Tape (%)	ly	••••	••••••	. 33.2
9	•	Bitragio	on Minieum Fr	ontal Arc - '	iare t	older	• > • • • • • • •	. 35
10	-	Bitragio	en Pegenian A	rs - Tape Ho	ider .		••••••	. 33.5
11	•	Brzygon	atic Diameter	- Spreading	Calip	er		. 14.7
12	-	Biprocys	gomatic Diame	ter - Spread:	ıng Ca	diper		. 14.2
13	-	Menton-S	Sellion Diage	ter - Slidim	g Cais	per	•••••	. 12.4
14	•	Bi 1ygani	atic Diameter	- Metric Gam	uge	•••••		. 15.5
15	•	Biprozy	gomatic Diame	ter - Metric	Eauge	· · · · · · · · · · · · · · · · · · ·		. 14.2
16	. Menion Sellion Diageter - Metric Sauge						. 13.1	
17	•	Observa:	tion of Anoma	lies:				
					·			
18	•		0 - 5 (0)					

Well the transport of the second second

<u>_</u>		Name: W	ILLIAM A. KEL	LEY		Subj	ect No.: 7	9
		S/N:		Sex: M	Race: B	<b>LAC</b> X	yāe: 1	9
•		. — <del> </del>	Assigned Ma	sk Size	Category	; FF	Val <b>æ</b> s	
:		MASK	Expert Fit	t : Alternate Size :		: Expert Fit	Alternate	Size
1		ILC	M		S :	!	;	
:		SCOTT	M	:	L	!		
:	AV	ON US10		:	S			
1		Height:	182.9 cm		2 . Wei	ght: 140 lbs		
3		Face Si	ze – Adjustab	le M <b>e</b> tr:	c T <b>ex</b> plat	e Circumferen	ce	<u>ca</u> 157
4	•	Submand	ibular Skinfo	ld	******	••••••	• • • • • • • • •	6
ຣ		Bitempo	rai Fossa - M	ini <i>s</i> um F	rontal Ar	c - Tape and I	Marker Teol	20.4
ō	•	Biprozy	gomatic Mento	n Arc -	Tape and I	Marker Teol	• • • • • • • • • •	27.1
7	•	Bitragia	on Minizus Fr	ontal Ar	eqaT - 3	Only	• • • • • • • • • •	30.1
S		Sitragio	on Pogani <b>c</b> n A	rc - Tap	ક ઉગો∀		• • • • • • • • • •	₩.2
ڀ	•	Bitragı	en Minique Fr	ontal Ar	e - Tape	Holder	• • • • • • • • • • • • • • • • • • • •	31-6
i Ç		Entragio	on Pagenion A	rc - Tap	e Holder			33.2
<b>i</b> 1	•	Braygoe	atic Diameter	- Sprea	ding Calı	pe:	••••••	14.2
. <u>-</u>	-	Biprozvo	gomatic Diame	ter - Sp	reading C	aliper	• • • • • • • •	10.5
13		Menton-	Sellion Diame	ter - Si	iding Cal	iper	·	:2
14	•	Sicygoza	atic Diææter	- Metr:	c bauge .	••••••	• • • • • • • • • •	. :S. i
15		Biprozvo	gosatic Dia <b>c</b> e	ter - Me	tric Sæug	e	• • • • • • • • • •	14.5
ls	•	menton t	Sellica Diame	ter - Ke	tric baug	e	• • • • • • • •	12.3
17			tion of Anoma					
			11 - S. 141 1					

A	٠.	Nase: Ki	ENNETH JACKS	KCN .		Subject No.: 80			
		S/N:	******	Sex: M	Race: B	LACK		Age:	18
÷ :			Assignes M	as! Size	Category	!	₽F U	/alues	
:		Mask :	Expert Fit	! Aite-c	nate Size	Expert	Fit I	Alterna	te Size
•		ILE	*1	:	S	:	;		
:		S2071		1	<u>.</u>	. ~	· :	~~~	
:	Ąį	/ER USIO	23	•	1	;	:		
1	•	Faight:	:92.8 cs		2. Wei	ght: 13	? lbs		
3-		Face Siz	s – Adjusta	bie:r:	ıc fesplat	e Circus	fer <b>e</b> nce	·····	157
4	•	Subsandi	bulær Skinf	old					4
5	_	Si <b>te</b> #por	ai Pusea -	ಗಣಾವಾತ ಕೆ	Frontel Ar	c - Tape	and Ma	erker To	ol 20.5
6	-	Siprozyg	posatic Ment	sa kre -	[ಕರ <del>ಲ</del> ಕಾರ	Marker To	io		27.1
7	-	Sitragio	ಚಾ ಗಿಣ-೩೦೦ F	rontal A	rc - lape	Only	• • • • • •		31.1
3	-	Sitraçio	m Pogenier	Arc · Taj	e eni,				32.4
9	-	Bitragio	റെ ത്രാലയുട്	rantal A	rc - Tape	Holder .			32
iċ	•	bitragio	an Pedanton	úrc - Teş	o= Holder	• • • • • • •	· • • • • •		55.0
11	•	Sizygoda	stic bramete	r - Sprei	adıng Calı	per	· • • • • • •		13.4
12		Siprozya	cmatic Diam	eter - S;	oreading C	aisper .			13
:5	ı	Menton-S	Sellico Dias	etar - 51	) ಕರ್ನಂತ್ರ (al	iper			13.4
<u>£</u> 4	•	Bizygona	atic Diamete	r Beir	ıc "auge .				14.1
15	-	51 2502 40	goostic Diem	eter - M	etric Gaug	e			17.5
: 5	•	Menton 9	Sellion Diam	eter - Me	stric Sauc	£		•••••	13.2
17	•		ion of Phos						
: c			~						
.5	-	COMPET	0 - 5 w	serud M	a st (892)	• • • • • • •		• • • • • •	<i>-</i>

A	A . Name: ANTHONY KELLUM Subject No.: 81										
		S/N:		Sex: M Race: B		_					
÷		· · · · · · · · · · · · · · · · · · ·		sk Size Category	: PF	Values					
;		rask :	_	: Alternate Size	: Expert Fit	: Alternate					
:		H.C	M	: L		:					
			<u>.</u>	-	:						
:		`	•	i L	•						
1	•	Height:	175.3 ca	2. Weig							
3	<u>ca</u> . Face Size - Adjustable Metric Template Circumference 163										
æ	•	Submandi	ibular Skinfs	ld	• • • • • • • • • • • • •	• • • • • • • • • •	3				
5	-	Ri teador	ral Fossa - M	inscus Frontal Ar	: - Tape and i	Marker Tool	20.5				
È	-	Biprosyq	posatic Mento	n Arc - Tape and :	Marker Tooi	• • • • • • • • • • • • • • • • • • • •	28.5				
7	•	Bitraçıo	on Hiniawa Fr	ontal Arc - Tape :	Only	• • • • • • • • • • • • • • • • • • • •	30				
3		Sitragio	an Pogonion A	rc - Tape Univ ,		• • • • • • • • • • •	17.8				
Ġ		Sitragio	on Hiniava Fr	ontal Arc - Tape i	Holder		31.8				
10		9:tracio	on Pogonion A	rc - Tape Holder .	• • • • • • • • • • • •		33.9				
11	-	Britadeus	atic Diameter	- Spreading Cali	per		14.3				
12	-	Biprozvo	pomatic biame	ter - Spreading Ca	aliper		14				
12	-	Henton-S	Sell:on Diame	ter - Sliding Cal:	iper	•••••	:7.9				
: =		512 <b>790</b> =8	atıc Diapeter	- Metric Gauge .			ì5				
15	•	Siprozyo	gosatic Diase	ter - Metric Gaug	2		14.4				
:5	. Menton Sellion Diameter - Metric Gauge										
17	•		tion of Anema								
18		-		being worst case)	-	_					

a. :	kane: Ki	EITH BICKNELL		از طناS	ect No.: 8	2
3	5/N:		Bex; M Race: W	HETE	Age: 1	7
:		Assigned Has	sk Size Category		Values	; :
	<b>15</b> k	Expert Fit	Alternate Size			
: 11	_C		S	*	=	:
50	377	L	i ii	=		:
	1 US10		5			:
		190.5 ca	Z. ≌ei			
3. 7	Face Siz	e – Adjust <b>a</b> b	le Metric Template	e Circusfaren	ce	<u>cn</u> 167
ą. S	ionsadui	bular Skinfo	d	• • • • • • • • • • • •	• • • • • • • • • • • •	4
5. 5	y rseber	ai Fossa - M	inimum Frontal Are	c - Tape and !	farker Tool	19.5
ė. S	procyc	ceatic Hentor	i firc - Tape and I	Marker Todi		27.8
7. E	itragio	a Miniaua Fra	ental Arc - Tase (	Only		29.5
3. 5	ii tragi c	a kešeurou sa	c - Tape Only	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	55.2
Ģ. <u>Ş</u>	:trag:c	m Hiniaus Fro	ental Arc - Tape	Holder		31
11 5	is traps c	an Pegonien er	c - Tape Holder	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	33
1: . £	: IYÇOMA	itic Diameter	- Spreading Cali	per		14.2
:1 . B	apres.q	postic Diaset	ter - Spreading C	aliper		13.4
[T M	izntan-t	eilion Diamet	eer - Sliding Cal	iper	• • • • • • • • • • • • • • • • • • • •	13.1
z , <u>e</u>	ir.cosa	t:: D:ameter	- Metric Gauge			14.8
:: . E	iprosys	o∞atic Diamet	ter - Metr:c Gauge	e	• • • • • • • • • •	15.8
16 . S	lenton 3	Slivon Diamet	er Metric Gauge	?		13.3
	bser vat	los of Anoma:	125:			
-						
<u>.</u> .		·				
			nesus morat cades			, <u>-</u>

A	•	Name: A	rian Bropky	Subject No.: 83			;		
		S/N:	The same of the sa	Sex: M	Race. W	HITE	Age:	20	<del>)</del>
÷.			Asstoned Ma	sk Size	Carecory	P	F Values		
:		HASK	Expert Fit	: Altern	ate Size	Expert Fit	Altern	ate	Size
:		ILC	ŝ		M				
:		SCOTT	_	1	n				
:		GN USIO	•	:	\$		:		
1	•	Height:	170.2 cs		2. Weig	pht: 130 lb:	s		
3	÷	Face Siz	te – Adjustab	le Metri	c Template	e Circumfere	nce		<u>er</u> 138
\$	•	Subsandi	ibular Skinfo	le,.					3
5	-	Bite≈po	ral Fossa - M	linisus F	rontal Ac	tine ege: - :	Marker T	co).	19.5
÷	•	Starozya	pomatic Mento	n Arc - '	Tap≘ and ?	tarker Tool .		- • •	24.7
?	,	Bitragi	on Kiniswa Fr	ontal Ar	c ~ Tape (	mlv		•••	27.4
ક	•	Estrago	en Sodourou y	rc - [ap	e Galv	******		* * •	29.8
Ġ	•	Bitragio	an Minimum Fr	cotal Ar	c - Tapa 4	:::::::::::::::::::::::::::::::::::::		<b>=</b>	31.2
÷	•	Bitragio	on Pagerian A	rs - Iab	e Holder .			· · ·	ŢĢ
:	•	817vgoe	itic Diem <del>e</del> ter	- Sprea	ding Ualo	Der		,	14
غد ا	•	gibuotAé	joestic Diese	ter – Sp	reading Co	diger			13.2
I	•	Menton-9	Sellion Diame	iter - Si	idıng Celi			• • •	12. E
		£11AGOws	atic Di⊖≉eter	- Hetri	с бавуе			• • •	14.7
S	•	Syprozy	gematic Diame	iter - Me	tric Sauge	÷ • • • • • • • • • • • • • • • • • • •	•••••	• • •	13.9
5	-	Menton (	Wilion Diane	ter - He	tric Bauga	*			12.1
7	-		tion of Anoma						
								- -	
8		<u>ದಿಸಬಳಿದ್ದಾ</u> ಕ	0: ≘ - û	baian wa	est capa;				

<u>initial distribution and an anticompanion of the contract of </u>

A . Name: BLACK (REPEAT) Subject No.: 84							4
		S/N:				- Age:	-
•				sk Size Category	: PF		
:			:   Expert Fit	: Alternate Size	Expert Fix		Size
:		:LC	! S		:	·	
:			. 5	M	:		
:	A۱	/DN US10	* *	<del>-</del>	:		
1	-	Height:	ca	2. Wai	çht: lbs		5.0
3	•	Face Si	ze - Adjustab!	le Metric Templato	e Circumferen	ce	<u>Ca</u>
ā	•	Sಲಾಹಾನರ	ıbular Skıntol	id	• • • • • • • • • • • • •	• • • • • • • • •	0
5	•	8i tempo	ral Fossa - M	inimum Frontal Ar	c - Tape and i	Marker Tool	0
÷	•	Biprozy	gomatic Mentor	n Arc - Tabe and i	Marker Tool	• • • • • • • • • •	ů
7	•	Sitregi	on Miniaus Fro	ontal Arc - Tape	Only	• • • • • • • • •	¢
8	•	Bitragı	on Fegenson Ar	rc - Tape Emly	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	Ù
ò	-	Bitraçi	on Minique Fro	ontal Arc - Tape :	Holder	• • • • • • • • • • • • • • • • • • • •	t g
Ü	•	Bitragi	on Pagarisan Ar	rc - Tape Holder	• • • • • • • • • • • • •		ۥ
1	•	grskåder	atic Diameter	- Shreading Cali	per		r.
2	•	Baprosy	gematic Diamet	ter - Spreading C	aliper		S:
3	•	Menton-!	Sellion Diamet	ter - Sliding Cal	193r	• • • • • • • • • •	<b>3</b> )
.3	•	Bizygom	atıc Diameter	- metric Sluge	• • • • • • • • • • • • •		÷
5	•	Biprozy	gopatic Diapel	ter - Metric Saug	e		<b>3</b>
ó	•	Menton (	Sellion Diamet	ter - Matric Sauge	e		Ð
7	•		tion of Anomal				
		~					
8		Comfort	0 - 5 (0 E	peing worst case)	•••••		

BELLEVER BE

A	. Name: JAMES W. BUTLER Subject No.: 85							
	3/N:		S≘x: M Race: :	<del>M</del> ITE	Age: 19	3		
<del>! -</del>		! Assigned Ma	Assigned Mask Size Category : PF Values					
:	Mask	Expert Fit	Alternate Size	•	Alternate	Size		
:	ILC	: M	: S		:			
:	SCOTT	) M	: s		:			
:	AVEN ESIG	•	: m	:				
1	. Height:	172.7 cm	2 . We:	ight: 139 lbs				
3	. Face Gi	ze – Adjustab	le Metric T <b>e</b> aplat	te Circuafar <b>e</b> n	ce	<u>==</u> 140		
4	. Submand:	ibular Skinso	18	• • • • • • • • • • • • • • • • • • • •	·····	4		
5	. Bitempo	ral Fossa - M	Enimum Frontal Ar	rc - Tape and I	Marker Tool	19		
Ġ	. Biprezve	gomatic Mento	n Arc - Tape and	Marker Fool .	• • • • • • • • • • • • • • • • • • • •	24		
-	. Bitragi:	on Miniaum Fr	ontal Arc - Tape	Only	• • • • • • • • • •	30		
8	. Bitragio	en Pagenion A	rc - fape Only	• • • • • • • • • • • • • • • •		30		
7	. Bitragi:	an Minimus 2-	ontal Arc - Tape	Holder	• •••••	32		
10	. Sitragio	on Feganion A	rc - Yape Wolder		• • • • • • • • •	30		
11	. Bisydom	atıc Dıa <b>xe</b> ter	- Spreading Cal	per		13.3		
12	. sipray	gomatic Diame	ter – Spreading t	aliper	•••••	12.4		
1 7	. Menten-	Sailtan Diame	ter - Sliding Cal	liper	•••••	12.1		
<u>11</u> 4	. Birygon	atıc Diametes	- Metric Bauge .			13.8		
13	. Bişrozye	gomatic Diame	Cer - Metric Gaug	Çe	• • • • • • • • •	13.1		
is	- Munton 9	Seliion Diame	ter – Metric Gaud	je	· · · · · · · · · · · · · · · ·	12.1		
17	. Observation of Amonalies:							
18			being worst case:			. <u>-</u>		

وجرائزال سيمتعوض والمتاهمة والمتاهمة والمتاهمة والمتاهمة والمتعاطرة والمتاهمة والمتاهمة والمتاهمة والمتاهم والمتاهم

A	A . Name: JAY HEFFELBOWER Subject No.: 86									
**************************************		: Assigned Ma	ask Size Category   PF Val							
;	MASK	Expert Fit	: Alternate Size	Expert Fit	: Alternate	Size				
!	ILC	ILC   M   S		-						
i	SCOTT	M	L							
1 6	AVON US10	M								
•	1 . Height: 175.3 cm 2 . Weight: 160 lbs									
з.	. Face Size - Adjustabla Metric Template Circumference 149									
4.	. Submandibular Skinfold 3									
5.	Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 19.6									
5.	Biprozygomatic Menton Arc - Tape and Marker Tool 26									
7.	Bitragio	n Minimum Fro	ontal Arc - Tape (	Only		30				
8.	Bitragio	n Pogonion Ar	c - Tape Only			30.5				
9.	Bitragio	n Minimum Fro	ontal Arc - Tape H	Holder		32				
ο.	Bitragio	n Pogoni <b>on</b> Ar	c - Tape Holder .		• • • • • • • •	31				
ı .	Bizygoma	tic Diameter	- Spreading Calip	er		13.2				
2.	Biprozyg	omatic Diamet	er - Spreading Ca	liper	• • • • • • • •	12.6				
3.	Menton-S	ellion Diamet	er - Sliding Cali	p <b>er</b>		12.9				
4.	Bizygoma	tic Diameter	- Metric Gaug <b>e</b>		• • • • • • • •	14				
<b>5</b> .	Biprozyg	omatic Diamet	er - Metric Gaug <b>e</b>	• • • • • • • • • • •	• • • • • • • •	13.1				
6.	Menton S	ellion Diamet	er - Metric Gauge	• • • • • • • • • •		13.2				
7.	Observat	ion of Anomal	ies:							
			ورون ورون الله بورد الله دورة الله الله الله الله الله الله الله الل							
	Alle ones milit right core lifte d'es right	COL NO. 1. 1. 10 CHE SON MONTH OF THE SON	med were tilt finde miller var i dette deler viv.) på 1 dele tillgå velk i dja 1 dele tillgå velk i dja 1 dele Velk der var var vilk selle i viv. 1 v. 1 dele till til 1 dele viv. 1 dele till 1 dele viv. 1 dele dele	nan der min det die; som tilb ann ber mit die Gib tilb	aper and all stills does not have been					
<b>.</b>			eing worst case)							

очина возначина возначана възначания возначания в

A. N	. Name: CARL LARIMER Subject No.: 87								
S	/N:		Sex: M	Race: W	HITE	Age: 15	?		
+ :				Category					
; MA	SK	Expert Fit			•	•	Size		
IL	 C	; M	: : :	S	; ;				
SCI	 DTT	: s		M					
: AVON	US10	: S	-	M		:			
1 . H	. Height: 185.4 cm 2 . Weight: 190 lbs								
3. F	. Face Size - Adjustable Metric Template Circumference 141								
4 . S	. Submandibular Skinfold 3								
5.8	. Ritemporal fossa - Minimum Frontal Arc - Tape and Marker Tool 19								
6 . E	. Siprozygomatic Menton Arc - Tape and Marker Tool 26.2								
7. B	itragı	on Miniawa Fr	untal Ar	c - Tape (	Only	•••••	29.5		
8 . E	įtragi	on Pegonian A	rc - lap	e Only	· <b>, · · · · · · · · · · ·</b> ·		33		
9.8	itragı	on Minimum Fr	ontal Ar	c - Tape i	Holder		32		
10 . 3:	ıtragı	on Pogenien A	rc - Tap	e Holder .	• • • • • • • • • • • •		33		
11 . B	ızygom	atıc Diamet <del>e</del> r	- Sprea	ding Calı	per		13.7		
12 . B	iprozy	gomatic Diame	ter - Sp	reading C	aliper		13.1		
13 . M	euton-	Sellion Diame	ter - Si	iding Cal	iper		12		
14 . B	ilygom	atic Diaweter	- Metri	c Gauge			14.5		
15 . 3	ıprozy	gomatic Diame	ter - Ha	etric Gaug	e	.,	13.7		
is. M	enton	Sellion Diame	ter - Ma	riric Daug	e		12.4		
17 . 0	. Observation of Anomalies:								
~-	——————————————————————————————————————								
18 . C	om:crt	0 - 5 (0)	pe:nd wo	est case)	********				

Name: JOEL MINDRUP Subject No.: 88 Sex: M Race: WHITE Age: 19 : Assigned Mask Size Category : PF Values : Expert Fit : Alternate Size : Expert Fit : Alternate Size : MASK M ILC L SCOTT M L AVON US10 ! S M Height: 175.3 cm 2. Weight: 136 lbs Face Size - Adjustable Metric Template Circumference ...... 120 Submandibular Skinfold ...... Bitemporal Fossa - Minimum Fronta: Arc - Tape and Marker Tool 19.7 Biprozygomatic Menton Arc - Tape and Marker Tool ...... 23.3 7. Bitragion Minimum Frontal Arc - Tape Coly ..... 30.4 Bitragion Pogonion Arc - Tape Only ..... S. 31 9. Bitragion Minimum Frontal Arc - Tape Holder ..... 32 10 . Bitragion Pogonion Arc - Tape Holder ..... 31.2 li. Bizygomatic Diameter - Spreading Caliper ...... 12. Biprozygomatic Diameter - Spreading Caliper ...... 13.1 Menton-Sellion Diameter - Sliding Caliper ..... 13. 12.2 Bizygomatic Diameter - Metric Bauge ...... 14. 14.5 15. Biprozygomatic Diameter - Metric Gauge ...... 13.7 15. Menton Sellion Diameter - Metric Gauge ..... 11.2 17 . Observation of Angmalies:

A	•	Hame: J	PSCN TEMORIO		ازطباك	ect No.: 89	7
		S/N:	***********	Sex: M Race: II	ndian	Age: 19	7
÷		· · · · · · · · · · · · · · · · · · ·	Assigned Ma	sk Size Category		Values	
		MASK	Experc Fit	Alternate Size	Expert Fit	Aiternate	Size
•		ILC	L	: M			
:	-\- <u>-</u>	SCOTT	L	. M			
:	AU 	CHI USIO	•	: M			
1	•	H€1ght:	192.8 cm	2 - Weig	ght: 170 lbs		<u>C</u>
3	•	Face Si	e - Adjustab	ie Metric Template	e Circumferen	C <b>&amp;</b>	182
4	-	Subpandi	ibular Skinto	ld	• • • • • • • • • • • • •	• • • • • • • • • •	7
5	•	Bitempor	ral Fossa - M	iniQum Frontal Arc	c Tape and i	Marker Tool	20.1
£	•	Efprozy	gomatic Mento	n Arc - Tape and 1	Marker Tool	•••••	26.5
7	•	Bitragio	on Minimum Fr	ontal Arc - Tape (	Only	•••••	32.5
8	•	Sicragio	n Pogonion A	rc - Tape Unly	• • • • • • • • • • • • • • • • • • • •	••••••	<b>3</b> 3.3
9	•	Bitragio	en Minimum Fr	ontal Arc - Tape !	Holder	- •	34.5
10	•	Bitragio	on Paganian A	rc - Tape Holder .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • •	३३.5
11	•	8i zygoma	atic Diameter	- Spreading Calif	per	•••••••	15.3
12	•	Biprozvo	gomatic D:ame	t <b>er –</b> Spreading Ca	aliper		14.7
13	•	Henton-9	Sellion Diame	ter - Sliding Cal	iper	• • • • • • • • •	13.4
14	•	Bizygoma	atic Diameter	- Metric Gauge		• • • • • • • • •	16.4
15	-	Biprozyo	pomatic Diame	ter - Metric Gauge	2	• • • • • • • • •	15.4
15	•	Menton S	Sellion Diame	ter - Metric Gauge	2	• • • • • • • • • • • • • • • • • • • •	12.9
17	•		tion of Anoma				
42							

S/N:						
		Sex! H	Race: W	HITE	Ager 20	<b>&gt;</b>
	Assigned M	ask Siza	Category		Vaiues	
MASK	Expert Fit	: Altera		•	filter rate	S; 2e
Irc		: :	3	·		
SCOTT	25	:	S			
ON USIC		-			:	
Height:	182.9 cm		2. Wei	ንጮቲ: 477 lbs		
Face Siz	:e - Adju≤tal	ole Metri	c Yespiat	e Circu <b>nferer</b> ,	c <b>e</b>	) 23 (3
Submandi	bular Skinfo	16		• • • • • • • • • • • • •		6
Bitempor	al Fossa - !	ាររាណជា F	rontal Ar	c - Tupe and !	Marker Tool	19.8
Biprozyg	pomatic Mento	on Arc -	Tape and	Marker Togl	•••••	25.6
Bitragio	n Miniaus Fr	rontal Ar	c - Tape	Caly	••••••	3C. 5
Bitragio	n Pagenian f	erc - Tap	e Onl/	* • • • • • • • • • • • • • • • • • • •		32-2
Bitragio	m Minimum Pr	-cntal A-	c - Tape	Hold≥r		32.5
Bitragio	n Fagonion i	ærc - Tap	e Holder	••••••	•••••	3%
Bicygoma	itic Diameter	Sprea	ding Calı	ਰੇਗ਼. ·····		:4.:
Biprozyç	comatic Diame	eter - Sp	reading C	aliper		: ₹
Menton-S	Sellion Diame	eter - Sl	ıdın <u>ğ</u> Cal	iper		12,5
B:7ygoma	tic Diameter	- ~ Metri	c Gauge .	• • • • • • • • • • • • •		15
Biprozyg	pomatic Diame	eter - Me	tric Saug	e	• • • • • • • • •	13.7
Menton S	ellion Piame	eter - He	tric Saug	e	.,	12.4
_						
_						
	HASK  JLC  SCOTT  EN US10  Height:  Face Siz  Submandi  Bitempor  Biprozyg  Bitragio  Bitragio	MASK Expert Fit  ILC M  SCOTT M  EN US10 M  Height: 182.8 cm  Face Size - Adjustal Submandibular Skinfo  Bitemporal Fossa - M  Bitragion Minimum Fr  Bitragion Minimum Fr  Bitragion Pogenion G  Bitragion Piameter  Biprotygematic Diameter  Biprotygematic Diameter	MASK Expert Fit Altern  SCOTT M  EN US10 M  Height: 182.8 cm  Face Size - Adjustable Metri Submandibular Skinfold  Bitemporal Fossa - Minimum F  Biprocygomatic Menton Arc -  Bitragion Minimum Frontal Ar  Bitragion Pogonion Arc - Tap  Bitragion Minimum Prontal Ar  Bitragion Pogonion Arc - Tap  Bitragion Pogonion Arc - Tap  Bizygomatic Diameter - Spread  Biprocygomatic Diameter - Spread  Biprocygomatic Diameter - Metri  Biprocygomatic Diameter - Metri	MASK Expert Fit   Alternate Size  JLC M S  SCOTT M S  EN US10 M S  Height: 182.8 cm 2. Mei  Face Size - Adjustable Metric Secolat  Submandibular Skinfold	MASK   Expert Fit   Alternate Size   Cxpret Fit    ILC   M	MASK Expert Fit   Alternate Size   Cxprrt Git   Citernate  JLC   M

in the side of the model that we will be a second of a second of the second

A	•	Name: F	BESPT NAILLON		Subje	ect No.: 9	1			
		5/N:		Sax: M Race: W	HITE	Age: 1	3			
;			Assigned ha	sk Size Category	: PF	Values	<del></del>			
:		MASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size			
		I.C	S	. 3						
:		SCOTT	. M	L						
:	AV	AVON USIQ : S : M : :								
1	•	Heighi:	171.4 cm	2. Weig	aht: 149 lbs		<u>ca</u>			
3	•	Face 3ia	e ~ Adju≤tab	le Metric Templato	e Circumfe <b>re</b> nd	ce	153			
4	•	Submandi	ibulis Skinfo	d	• • • • • • • • • • • • • • • • • • • •	•••••	5			
5	•	grteebo	ral Fossa - M	inimum Frontal Arc	= - Tape and t	Marker Tool	20			
á	-	Bibloská	gematic Mente	n Arc – Tape and 7	Marker Tool	• • • • • • • • •	25			
7	-	Sitragio	on Monidum Fr	ontal Arc - Tape (	Daly	••••••	29 <b>.9</b>			
ទ	•	Bitragio	on Pagenton A	c - Tape Only	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	30			
Ġ	-	8itragio	on Munimum Fro	ončal Arc - Tape i	Holder	• • • • • • • • •	31.5			
10	•	Bitracio	on Pogranion A	rc – Tape Holder .		•••••••	29.7			
:1	-	Bitygons	atic Diamerer	- Spreading Calif	Der	••••••	13.2			
12	•	#ipro/yo	gGmatic Diame	ter - Spreading Ca	aliper	• • • • • • • • • •	12.4			
ıS	-	Menton-S	Sellion Dia <del>ș</del> e	ter - Sliding Cali	iper		12.5			
14	•	Bizygome	atic Diame'er	- Metric Sauge	• • • • • • • • • • • • • • • • • • • •	••••••	13.8			
15	•	Biprezyo	dowațic Braye.	ter - Metric Sauga	Ē	• • • • • • • • •	13.2			
15	•	Menton 9	Sallien Disme	ter – Metric Sauge	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	12.7			
17	•		tion of Angma							
18		Confort	0 - S (0 )	being wor <b>s</b> t case)	•••••					

Α.	Name: Ri	AMON PRISAN		Subje	ect No.: 97	?			
	S/N:		Sex: M Race: W	HITE .	Age: 19	•			
:		Assigned Ma	sk Size Category	PF					
	MASK	Expert Fit	=	•	Fit : Alternate Si				
:	ILC	M	S						
;	SCOTT	M	L						
: A	VON US10	•	S						
1.	Height:	177.8 ca	2. Weig	pht: 155 lbs					
₹.	Face Siz	ze - Adjustab	ie Metric Templato	e Circu <del>s</del> ferenc	:e	<u>ca</u> 150			
4.	. Submandibular Skinfold 4								
5.	Bitempor	ral Fossa - M	inimum Frontal Arc	= - Tape ≩nd i	Markar Tool	19.7			
6.	Biprozyo	gomatic Mento	n Arc - Tape and 1	erker Tool		26.5			
7.	Bitragio	on Minimum Fr	ontal Arc - Tape (	Boly		31.4			
8.	Bitragio	on Paganian A	rc - Tape Salv	· • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	32			
. ė	Bitragio	on Minimum Fr	ontal Arc - Tape H	dolder		33.5			
16.	Bitragio	on Paganian A	rc - Tape Holder .		• • • • • • • • • • • • • • • • • • • •	32.5			
11 .	Bizygoma	stic Diameter	- Spreading Calip	per		14.7			
12.	grbeskå	gomatic Diame	ter - Spreading Ca	aliper		14.2			
13.	Menton-S	Ellion Diame	ter - Sliding Cal:	per		12.9			
14 .	S) zygoza	itic Di <del>stet</del> er	- Metric Gauge			15.5			
15 .	Bipropyo	gomatic Diame	ter - Metric Gauge	· · · · · · · · · · · · · · · · · · ·		14.3			
15.	Menton 3	Sellion Diame	tar - Metric Gauge	······		12.7			
17 .		tion of Ansae							
					- ·				
18 .	Confort	0-5 (0)	ceing worst case)	•••••		. ~			

Α.	Name: LO	OREN INDAHL			Subj	ect No.: 93	3
	S/N:		Sex: M	Race: Wi	ніте	Age: 29	>
+ :		Assigned M	ask Siz <b>e</b>	Category	; pr	Values	
: H	iask i	Expert Fit	: Altern	ate Size	Expert Fit	Alternate	Size
1	LC	L	-	M			
	COTT	Ŀ	:	H			
ave:	# US10	-	-		!		
i .	H <del>e</del> ight:	182.2 ca		2. Weig	ght: 185 lbs		
₹.	Face Siz	e - Adjusta	ble Metri	c Template	e Circumferen	:=	<u>ca</u> 176
4 .	Submandi	bular Skinf	eld	•••••	• • • • • • • • • • • • •		3
5.	3itempor	ral Fossa - 1	Miniaua F	rontal Arc	- Tape and 1	Marker Tool	20.7
6.	Biprozyg	gomati: Ment	on Arc -	lape and :	Marker Tooi		26.5
7.	Bitragio	an Minimum F	rontal Ar	c - Tape (	Gnly	,,	30.9
s.	Bitragio	on Pagenian (	Arc - Tap	e Guly	••••••		3 <b>3</b>
9.	Bitragio	n Miniawa F	rontal Ar	c - Tape H	Holder		32.5
1¢ .	Bitragio	n Pagonion	Arc - Tap	e Holder .	• • • • • • • • • • • • •		32
ii .	Bizygona	atic Bramete	r - Sprea	ding Calip	per	• • • • • • • • • • • • • • • • • • • •	13.4
12 .	8iprozvo	gesatic Diam	eter - Sp	reading Ca	aliper		12.9
13.	Menton-S	Rellion Diam	eter - Sl	iding Cali	iper	• • • • • • • • • •	15.9
14 .	Bi zygoma	atic Diamete	r - Metri	c Sauge	• • • • • • • • • • • • • • • • • • • •	,	14.4
15 .	Biprozyc	pomatic Diam	eter - Me	etric Gauge	2	• • • • • • • • • •	13,5
16 .	Menton S	Sellion Diam	eter - Me	tric Gauge	2	• • • • • • • • • • • • • • • • • • • •	14.5
17 .		tion of Anom					
18 .	Co <del>nf</del> ort	0 - 5 10	perud »c	rst case)		• • • • • • • • • • •	

A	•	Name: El	RAILEY BARNES		ازطينا	ect No.: 94		
		S/h:		Sex: M Race: W	HITE	Age: 23		
+			Assigned Ma	sk Size Category	PF	Values	<del>-</del>	
:	MASK : Expert Fit : Alternate Size : Expert Fit : Alt					Alternate	Size :	
1		ILC : S : M :						
:	·	SCOTT M S						
•	AV	en usio	•	S	·	•	:	
				2 . Wei: le Metric Templat		<b>TP</b>	<u>ca</u> 139	
				ld			4	
				inimum Frontal Ar			19.4	
		_		n Arc - Tape and I			25	
	•	-	-	ontal Arc - Tape			2 <b>9</b>	
	•	_					31.2	
	•	_		rc - Tape Only			31.2	
	•	-		ontal Arc - Tape				
	•			rc - Tape Holder			31	
11	•			- Spreading Cali			15.2	
	•		-	ter - Spreading C			12.7	
13	•			ter - Sliding Cal				
14	•	Bizygom	atic Diameter	- Metric Bauge .	• • • • • • • • • • •		13.2	
15	•	Biprozy	gomatic Diame	ter - ∺etric Saug	e	••••••	13	
1ė	•	Menton :	Sellion Diame	ter - Metric Gaug	e	• • • • • • • • •	12.4	
17	•		tion of Anoma					
18		Comfort	0 - 5 (0	oeing worst case)		••••••		

THE COLD STREET STREET

А	•	Name: Ti	HUMAS PIEORSH			: Sub	ect No.:	95
		S/N:		Sex: M	Race: Ki	HITE	Ag <b>e</b> :	18
÷			Assign <b>e</b> d Ma	sk Size (	Category	PF	Values	
:		MASK	Expert Fit	Alterna	ite Size	Expert Fit	Alternat	te Size
•		ILC .	M	: :	S			
1		SCOTT	Ħ	,	S			
:	AV	CN US10	M M	:	S			~-
1	•	Height:	177.8 cm		2. Weig	jht: 1 <b>5</b> 5 l <b>b</b> s		
3	•	Face Siz	:e - Adjustab)	ie Metric	Tesplate	e Circumferend	e	<u>cm</u> 139
4	-	Submandi	bular Sxinfe	ıd		• • • • • • • • • • • • • • • • • • • •		4
5	-	Bitespor	al Fossa - M	inimu <b>a</b> Fr	ontal Arc	- Tape and :	larker Too	ol 20.3
ś	•	Baprozyo	comatic Mento:	Arc - 1	ace and t	larker Tosi		. 25.2
7	•	Sitragio	on Minisum Fro	ontal Arc	: - Tape (	Only		29.7
3	•	Bitragio	on Fogonion Am	rc - Tape	Grly	• • • • • • • • • • • • • • • • • • • •	• • • • • • • •	30.2
9	•	Sitragio	on Minimum Fro	ontal Arc	- Tape H	iolder		. 32
10	•	Sitragio	on Pegenison Ar	гс — Таре	Holder .	• • • • • • • • • • • • •		31.2
11	•	Bizygoma	atic Diameter	- Spread	ling Calip	oer		. 14.2
12	-	Biprozyg	pomatic Diame	ter - Spr	reading Sa	aliper		. 13.5
13	•	Menton-S	Sellion Diame	ter - Sli	ding Cali	iper		. 11.9
14	•	BrsAdows	etic Diameter	- Metric	6auge	• • • • • • • • • • • • • • • • • • • •		. 14.9
15	•	Biprozyg	gomatic Diame	ter – Ket	ric Gauge	2		. 14
16	•	Menton S	Sellion Diamet	ter - Met	ric Sauge	2		. 11.7
17	•		tion of Anomal					
15		Santaat	6 - 5 - 6 - 1					

A	A . Name: PAPILLION (REFEAT) Subject No.: 96										
		S/N:		Sex: M Race: -		- Age:	•				
+			Assigned Mas	sk Size Category							
:		MASK   Expert Fit   Alternate Size   Expert Fit   Alternate Si									
1		ILC S M									
•		SEOTT	S	: M !							
:	AV	ON US10	M	•							
i	•	Height:	СЯ	2. Wei	ght: 15s		<u>Cm</u>				
3	•	Face Si	ze – Adjustabi	le Metric Templat	e Circumferen	c <b>e</b>	ō				
4	•	Submand	ibular Skinfol	ld	• • • • • • • • • • • •	••••••	o				
5	•	Bitempo	ral Fossa - Mi	inimum Frontal Ar	c - Tape and i	Marker Tool	0				
É	•	Biprozyo	gomatic Mentor	a Arc - Tape and	Marker Tool	•••••	U				
7	•	Bitragı	on Minimum Fro	ontal Arc - Tape	Only	•••••	0				
ន	•	Bitragio	on Pogenien Ar	rc - Tape Only	• • • • • • • • • • • •	• • • • • • • • •	0				
7	•	Bitragio	on Munimum Fro	ontal Arc - Tape	Hoider	• • • • • • • • •	o				
Ċ	•	Bitragio	on Pogenian Ar	rc - Tape Holder			÷				
i 1	•	Bizygom	atic Diameter	- Spreading Calı	per	• • • • • • • •	o				
12	•	Biprozy	gomatic Diamet	ter - Spreading C	aliper	• • • • • • • • •	0				
13	-	Menton-	Sellion Diame	ter - Sliding Cal	iper	• • • • • • • • •	Ċ				
į	•	31 2 A d C W (	atic Diameter	- Metric Bauge .	• • • • • • • • • • • •	• • • • • • • • • •	o				
iŝ	-	Biprozv	gumatic biane	ter - Metric Gaug	e		o				
Ė	-	Menton 9	Sellion Diamet	ter - Metric Gaug	5	• • • • • • • • •	o				
17	,	<u>Gbserva</u>	tion of Anoma	lies:							
						-					
18	_	Confort	0 ~ 5 (0 )	neino worst case)							

A.	Name: R	RIAN IMHOFF		Subje	ect <b>No.:</b> 97	r
	S/N:		Sex: M Race: W	HITE	Age: 19	•
+ :		Assigned Ma	sk Size Category	PF	Values	
	MASK	Expert Fit	Alternate Size   Expert Fit		: Alternate Si:	
:	ilc		; M			
:	SCOTT	S	i n			
; A'	VON US10	S			•	
1.	Height:	177.9 cm	2. Wei	ght: 145 lbs		
з.	Face Sia	ze – Adjustab	le Metric Templato	e Circumfer <b>e</b> no	ce	<u>=a</u> 120
<b>i</b> .	Subsandi	ibular Skinfo	ld	• • • • • • • • • • • • • • • • • • • •		3
5.	Bitespor	ral Fossa - M	inimum Frontal Arc	c - Tape and t	farker Tool	17.9
ė.	Biprozys	gomatic Mento	Arc - Tape and :	arker Tool		24
7.	Bitragio	on dinieum Fra	ontal Arc - Tape (	Only		28
e.	Bitragio	on Pagantan As	rc - Tape Only	• • • • • • • • • • • • •		28.7
9.	Sitragio	on Kiniawa Fro	ontal Arc - Tape H	dolder	• • • • • • • • • •	30.5
10 .	Bitragio	on podeutou w	rc - Tape Holder .		• • • • • • • • •	29.5
<b>:1</b> .	Sizygom	stic Diameter	- Spreading Cali	oer	• • • • • • • • •	i2.5
12 .	Biprozyo	pomatic Diame	ter - Spreading Ca	aliper		11.7
13.	Menton-9	Sellion Diame	ter - Sliding Cal:	iper	••••••	11.4
14.	Bizygome	atic Diameter	- Metric Gauge	• • • • • • • • • • • • • • • • • • • •		13.3
15 .	Biprozyo	emsic Disme	ter - Metric Gaug	2		12.6
16 ,	Menton S	Sellion Diace	ter - Metric Sauge	2	• • • • • • • • •	11.7
17 .	Chsarvai	tion of Phoma	lies:			
		***********				
is .	Confort	0 - 5 i0 t	peing worst case)	•••••		

A	•	Name: Di	ENNIS CHAISTI	ε	Subj	ect No.: 9	2
		S/N:		Sex: M Race: W	HITE	Age: 1°	<b>?</b>
÷·			Assigned Ma	sk Size Category	PF		
:		MASK	Expert Fit	: Alternate Size		Alternate	Size
:		ILC	S	: M			
:		SCOTT	n:	•		; ;	
:	AV	en usio	\$ \$	. h			
1	•	Height:	172.7 c≈	2. Weig	ght: 168 lbs		_
3	•	Face Siz	e – Adjustab	le Metric Templato	e Ci <i>rcum</i> feren	c <b>e</b>	<u>=R</u> 140
4	•	Submandi	ibular Skinfo	1ਰ	· • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	5
E	-	Sitempor	rai Fossa - M	inisum Ffontal Arc	c ~ Tape and I	Marker Tool	19.1
6	-	Biprozyg	gomatic Manto	n Arc - Tape and !	Marker Tool	• • • • • • • • • •	25.7
7	•	Bitragio	on Minimus Fr	ontal Arc - Tape (	Baly		28.7
8	•	Bitragio	on Poyenien A	rc - Tape Only	• • • • • • • • • • • • • • • • • • • •		30.5
3	•	B:trag:a	or Minimum Fr	ontal Arc - Tape N	Holder	••••••	31.2
10	-	Bitragio	n Pogenian è	rc - Tape Holdsr .	• • • • • • • • • • • • •		31
11	•	Bizygosa	stic Diameter	- Spreading Cal.	)9r	• • • • • • • • • • • • • • • • • • • •	13.7
12	•	Etprotyg	posatic Diame	ter - Spreading Ca	aliper		13.3
13	•	Menton-S	Sellion Diame	ter - Sliding Cali	iper		11.7
14	•	Bilygona	itic Diameter	- Metric Gauge			14.1
15	•	Biprozyo	gomatic Diame	ier - Metric Gaugs	2		14.9
15	-	Menton S	Sellion Diame	ter - Metric Gauge	· · · · · · · · · · · · · · · · · · ·		11.8
17	•	_	tion of Anoma				
18		Confort	9 - 5 (0)	being worst case)			

The second secon

A	•	Name: St	ERALD KAISER			Subje	ect No.: 9	9
		S/N:		Sex: M	Race: W	HITE	Age: 1	8
:			Assigned Ma		Category	PF	Values	
:		MASK	•	-		Expert Fit		Size
•		ILC   M   L						
:		SCOTT   M   L						
	AV	ON USIO	=	;	i.			
1					2. Weig	ght: 155 lbs		- m
3	•	Face Si	e - Adjustab	le Metri	c Templata	e Circumferend	ce	<u>ca</u> 155
4	•	Subaandi	bular Skinfo	id			• • • • • • • • •	4
5	•	Bitempo:	ral Fossa – M	liniaum F	rontal Acc	- Tape and :	Marker Tool	20
Ė	•	Biprozyg	gomatic Mento	n Ar≃ -	Tape and i	Marker Tool	••••••	25.5
7	-	Bitragio	on Miniawa Fr	ontal Ar	c ~ Tape (	Only	• • • • • • • • • •	30.6
3	•	Sitragio	an Peganian A	rc - Tap	e Caly		• • • • • • • • •	32.2
ټ	•	Bitragio	on Minimum Fr	ontal Ar	c - Tape }	Holder		33.2
Ð	•	b <u>i</u> traqid	en Pogenian A	rc - T69	e Holder .		• • • • • • • • •	32.2
11	-	Sizydoma	itic Diam <b>et</b> er	- Sprea	ding Calip	per		13.4
12	•	Biprozvo	iomatic Diame	ter – Sp	reading Ca	aliper	• • • • • • • • • • •	12.2
13	•	Manton-S	Bellion Diame	ter - Si	iding Cali	iper	• • • • • • • • • •	12.8
14	-	Sizygoma	atic Diampter	- Metri	c Gauge	• • • • • • • • • • • • • • • • • • • •	•••••	14.1
15	•	Biprozyo	pomatic Diame	ter - Me	tric Gauge	2	• • • • • • • • • •	13
1ê		Menton 9	Sellion Diame	ter - Me	tric Gauge	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	12.3
17	-		tion of Anoma					
•		Castant	0 - 5 (0	• · · · · · · · · · · · · · · · · · · ·				

and the state of t

A	-	Name: W	ARREN (REFEAT	T3		Sub j	ect No.: 1	00			
		S/N:		Sex: M	Race:		- Ag <b>e:</b> -	-			
:				sk Size	Category	PF	Values				
•		MASK	Expert Fit	: Altern	ate Size	Expert Fit	: Alternate	Size			
•		ILC .		:	M		:				
:		SCOTT	S	:	M		:				
:	AV	US10	•	:	M		:				
1	. Height: cm 2 . Weight: lbs										
3	•	Face Si:	e – Adjustab	le Metri	c Template	e Circumferen	ce	O CW			
4	•	Submandi	ibular Skinfo	ld	•••••	• • • • • • • • • • • • •	•••••	0			
5	•	Bitempor	ral Fossa - M	liniaum F	rental Arc	- Tape and I	Marker Tool	o			
5	-	Biprozy	omatic Mento	n Arc -	Tape and ?	tarker Tool .	• • • • • • • • • •	o			
7	-	Bitragio	on Minimum Fr	ontal Ar	c - Tape (	Onlv	• • • • • • • • •	0			
8	•	Bitragio	on Pegenien A	rc - Tap	e Only	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	õ			
9	-	Bitragio	on Minimus Fr	ontal Ar	c - Tape H	Holder	• • • • • • • • • • •	e			
10	•	Bitragio	en Pagenien A	rc – Təp	e Holder .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	٥			
ti	•	Bizygoa	atıc Diaseter	- Sprea	ding Calig	oer	•••••	c			
12	•	Biprozyo	gomatic Diame	eter - Sp	reading Ca	aliper	•••••	0			
13	•	Menton-S	Selli. Diame	eter - Sl	iding Cali	iper	• • • • • • • • • •	ŏ			
14	•	Bizygees	stic Diameter	- Metri	c Sauge	• • • • • • • • • • • • •	• • • • • • • • • • • •	o			
15	•	Siprozvo	gematic Diame	ter - Me	tric Gauge	=	• • • • • • • • • •	>			
15	-	Menton 3	Sellion Diame	ter - Me	tric Sauge	=	• • • • • • • • • • •	o			
17	•		tion of Amema								
18	•					•••••		••			

A	•	Nage: Bi	ENNY FHILLIPS		Subje	ect No.: 1	01			
		S/N:	<del></del> (	Bex: M Race: Wi	4ITE	Age: 21	3			
÷-			-	sk Size Category	PF	Val¢≥s				
1	:	MASK	•	Plternate Size	•	Alternate	Size			
:		ILC		М						
i			s	M			•			
:	AV		K.	•		=				
1	. Height: 182.8 cm 2 . Weight: 190 lbs									
3	~	Face Siz	ce - Adjustab)	le Metric Template	e Circumfer@no	ee	142			
4	•	Submandi	ibular Skinfol	ld	• • • • • • • • • • • • • • • • • • • •		6			
5	. Bitemporal Fossa - Minimum Frentzl Arc - Tape and Marker Tool 18.9									
6	. Piprozygomatic Menton Arc - Tape and Marker Tool 25.5									
7	•	Bitragio	on Miniaum Fro	rital Arc - Tape i	Only	••••••	30.4			
3	-	3it∙agic	on Pogonion &	c - Tape Only			31.2			
7	•	Bit. agic	in Miniqua Fro	ontal Arc - Tabe I	Holder	• • • • • • • • • • •	31.5			
10	-	Bitragio	on Pagetijan Ar	rc - Tape Holder .	• • • • • • • • • • • • • • • • • • • •		31.2			
ιI		9127000	atic Diameter	- Goreadino Calip	oer		14.1			
12	-	Siprocyc	gomatic Diagel	ter - Spreading Ca	aliper	• • • • • • • • • •	15.2			
13	•	Menton-S	Sellion Diame	ter - Śliw.ng Cal:	per	••••••	11.6			
:4	-	2:2yqom	stic Diameter	- Metric Sauge	• • • • • • • • • • • • •		14.5			
15		Branasy	gomytic Diame	ier – Matric Sgigi	e ••••••••••••••••••••••••••••••••••••		17.8			
15	•	Menton S	Sellion Diame	ter - Metric Gauge	· · · · · · · · · · · · · · · · · · ·		11.7			
17	•	Observat	tion of Anomal	i:es:						
		*								
13	•			ezing worat case)						

A		Name: L	Subj	ect No.: 1	102				
		S/N:	<del></del> (	Sex: M Race: -		- Age. ~	-		
<del>+</del> :			Assigreó Ma	sk Size Category	; >F	Values			
:		MASK	: Expert Fit	: Alternate Size	•	: Alternate	Size		
:		ILC	;	; M					
:		SCOTT	Н	S	·				
:	A'	/DN US10	S	•					
1	•	Height:	са	2. Wei	ght: lbs				
5	•	Face Siz	ze - Anjustabi	le Metric Templat	e Sircumferan	CP	<u>C≇6</u>		
4	•	Subpandi	ibular Skinfo	id	• • • • • • • • • • • •	••••••	٥		
5	•	Bitempo:	ral Fossa - Mi	inimum Frontal Ar	c Iape and I	Marker Tuol	0		
ô		. Biprezygomatic Mentan Arc - Tape and Marker Fool 0							
7	•	. Bitragion Minimum Frontal Arc - Tapa Smly							
8	•	Bitragio	on Pagonian Ar	rc ~ Tape Im)v			è		
3	-	Bitragio	on Minimua Fro	ontal Arc - Tipe	Molder		Û		
10	•	E:tragio	on Pogonion Ar	rc - Tape Ho:der		• • • • • • • • • • • • • • • • • • • •	ò		
11	-	Elivgona	atic Diageter	- Spreading Cali	per	• • • • • • • • • •	0		
12	•	Biprozyo	osatic Pramet	ter - Spreading S	aliper	· · · · · · · · · · · · · · · · · · ·	o		
13		Menton-9	Sallion Diamet	ter - Eliding Cai	iper	> • • • • • • • • •	9		
14	•	Brzygona	atic Diameter	· Metric Gauge .	• - • • • • • • • • • •	••••	43		
15	-	Biprozvo	gomatic Diamet	ter - Metric Gaug	e	• • • • • • • • • • •	õ		
10	•	Menton S	Sellion Diamet	ter - Metric Gaug	e	•••••	G		
17	-		tion of Anomal						
16		Confort	A - 8 . \ \	on we worst soci					

Α.	. Name: DO	DYALD COCHRAN	Sunje	ect No.:	103				
	S/N:		Sex: M	Race: W	HITE	Age:	20		
+ :		Assigned Ma	sk Size	Category	: PF	<b>Values</b>			
	MASK	Expert Fit	Altern	ate Size	Expert Fit	Alternat	e Size		
:	ILC	М	:	L	:		_		
:	SCOTT	L	: :	ห			_		
: 6	CLSN NGA			L			_		
1.	_	185.4 cm			ght: 210 lbs		<u>ca</u> . 153		
₹.		_		-	e Circumferens				
4 .	Submandi	ibular Skinfo	ld	• • • • • • • •	• • • • • • • • • • • •	• • • • • • • • •			
5.	5. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 19.7								
5.	. Biprozygomatic Menton Arc - Tao≥ and Marker Tool 27.6								
7.	. Bitragio	on Minisus Fr	ontal Ar	c - Tape (	Only	• • • • • • • • •	. 30.5		
٥.	. Bitragio	on Pogonian A	rc - Tap	e Coly			. 32.8		
7.	Bitragio	on Mini <b>au</b> a Fro	ontal Ar	c - Tape !	Holder		. 32.5		
iv .	. Bitragi	on Pagantan A	rc - Tap	e Holder .			. 32.9		
11 .	. Bizvgom	atic Diameter	- Sprea	ding Calı	per		. 14.3		
i2 .	. Bisrozyo	gomatro Diame	ter - Sp	reading C	aliber	• • • • • • • •	. 13.4		
13 .	. Menton-S	Selijon Diame	ter - 51	iding Cal	iper	• • • • • • • •	. 13.3		
14 .	. Bizygoa	atic Diameter	- Metri	c Sauge .	••••••		. 15.2		
15 .	. Biprozy	gosatic Diame	ter - He	trıc Gaug	9	- • • • • • • • • • • • • • • • • • • •	. 14.3		
16 .	. Menten 9	Sellion Diame	ter - Me	tric Gaug	면		. 13.5		
17 .		tion of Andra							
			_~						
			-						
19 .	Comfort	0 - 5 (0 )	beira wo	rst case)					

A . Name:	RUSSELL LOUDER	MILK	: Sub j	ect No.: 10	<b>)</b> 4				
S/Na	the time give time upon take the right near gain gifts	Sex: M Race: Wh	HITE,	Age: 19	7				
#	: Assigned Ma	sk Size Category	PF	Values					
MASK	<u>.</u>	: Alternate Size	•						
ILC	, M	L.,		**************************************					
SCOTT	L	M		These depart which survey decree					
: AVON US10	o i M	S							
·		2. Weig							
3 . Face 9	. Face Size - Adjustable Metric Template Circumference 144								
4 . Submar	. Submandibular Skinfold 3								
5. Bitemp	. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 19.5								
6. Biproz	ygomatic Mentor	Arc - Tape and M	Marker Tool		26.5				
7. Bitrac	jion Minimum Fro	ontal Arc - Tape C	Only	• • • • • • •	29.3				
8. Bitraç	ion Pogonion Ar	c - Tape Only	• • • • • • • • • • • • • • • • • • • •		31.6				
9. Bitrag	ion Minimum Fro	ontal Arc - Tape H	Holder		31.4				
io . Bitraç	ion Pogonion Ar	c - Tape Holder .			31.7				
11 . Bizygo	omatic Diameter	- Spreading Calip	er		13.8				
12. Bipņoz	ygomatic Diam <b>et</b>	er - Spreading Ca	liper		13.2				
13 . Mentor	-Sellion Diamet	er – Sliding Cali	per		12.9				
14. Bizygo	matic Diameter	- Metric Gauge	• • • • • • • • • • • • •		14.5				
15 . Biproz	ygomatic Diamet	er - Metric Gauge			13.7				
16 . Menton	Sellion Diamet	er - Metric Gauge			13				
<del>-</del> · · · · · · · · · · · · · · · · · · ·	ation of Anomal								
gaser rpred gaser	nagana diginar sanga sangan samas yang sesite forga santo se na sakan (Mose sena wasa sake	Annual and a series about the space wind that is the transfer four winds of the Section Const. (i.e., Section Const.)	The section of the contract of the section of the contract of	. क्रांच्याचे प्रमाणि प्राणिक स्थापन क्रिकेट व्यक्ति प्राणिक स्थापन					
18 . Comfor	t 0-5 (0 b	eing worst case)	• • • • • • • • • • •		, <del>.</del>				

A . Name: T	A . Name: TODD SCHNEEKLOTH Subject No.: 105								
<del>-</del> · · · ·		Sen: M Race: W		Age: 18					
<b>;</b>	! Assigned Mas	sk Size Category	: PF	Values					
MASK	Expert Fit	Alternate Size	Expert Fit	Alternate	Size				
ILC	i M	S							
SCOTT	i m	S							
AVON US10	, M	S	Desire these same days and		;				
•		2. Weig							
3 . Face Si	. Face Size - Adjustable Metric Template Circumference 138								
4 . Submand	ibular Skinfol	d			5				
5. Bitempo	ral Fossa - Mi	nimum Frontal Arc	c - Tape and t	Marker Tool	20				
6. Biprozy	gomatic Mentor	And - Tape and t	Marker Tool		26.7				
/ . Bitragio	on Minimum Fro	ontal Arc - Tape (	Only		29				
8. Bitragio	on Fogonian Ar	c - Tape Only		• • • • • • • • • •	32.5				
9. Bitragio	on Minimum Fro	ontal Arc - Tape H	Holder		31.5				
10 . Bitragio	on Paganian Ar	c - Tape Holder .			32.5				
11 . Brzygoma	atic Diameter	- Spreading Calip	oer	• • • • • • • • • • • • • • • • • • • •	13.6				
12 . Biprozyo	gomatic Diamet	er - Spreading Ca	aliper	• • • • • • • • • •	13				
13 . Menton-9	Sellion Diamet	er - Sliding Cali	iper		12,7				
14 . Bizygoma	atic Diameter	- Metric Gauge			14.5				
15 . Biprozyo	gomatic Diamet	er - Metric Gauge	· · · · · · · · · · · · · · · · · · ·		13.7				
16 . Menton S	Sellion Diamet	er - Metric Gauge			12.7				
	tion of Anomal		•						
terms many county religion strong county and the	aga mad agai ting dan taka mila nina taun mila an agai mila sun taka	Miles gaves diese unite texts water water trade value total diese dates water bille allege bijd view.	MI MAN HANGE ANALY SEE STATE SHOW THE ME THE SECOND STATE OF SECOND SECO	a deter tippe , was paper totally school address.					
		and the second of the second s							
18 . Comfort	o <b>- 5</b> (o b	eind worst case)							

Α		Name: S	TANLEY HALCOM	Subje	Subject No.: 106					
				Bex: M Race: W		-				
+-		:	Assigned Mag	sk Size Category	; PF	Values	:			
1		MASK !	Expert Fit	Alternate Size	Expert Fit	: Alternate				
į		TIC :	M	S						
- i		SCOTT !	S							
{ -	Δυ	ON US10 !	M							
i				2. Wei			<u>c m</u>			
3		Face Siz	e – Adjustab:	le Metric Templat	e Circumf <b>ere</b> n	ce	118			
4		Submandi	bular Skinfol	ld			3			
5		. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 19.1								
6		. Biprozygomatic Menton Arc - Tape and Marker Tool 23.2								
7		Bitragio	on Hinimum Fro	ontal Arc - Tape	Only	• • • • • • • • • •	27			
3	•	Bitragio	on Pogonion Ar	c - Tape Only			29			
9		Bitragio	on Minimum Fro	ontal Arc - Tape	Holder		29.5			
10		Bitragic	on Pogenion Ar	c - Tape Holder			29.4			
1.1		Bizygoma	atic Diameter	- Spreading Calı	per		13			
12		Biprozyg	omatic <b>Diame</b> t	er - Spreading C	aliper		11.9			
13	•	Menton-S	Sellion Diamet	er - Sliding Cal	iper		11.5			
14		Bizygoma	itic Diameter	- Metric Gauge .			13.4			
15	•	Siprozyc	jomatic Diamet	er - Metric Gaug	e		12.4			
16		Menton S	Sellion Diamet	er - Metric Gaug	e	• • • • • • • •	11.6			
17	•		ion of Anomal	iest	•					
		**************************************		en right tight denne einige splas ander met ge op passe per i man tiber. Et stept einis tilber	rende des de sapre des de marco estado como estado estado estado estado estado estado estado estado estado esta					
18		- Under	e see can de car esta de de cerca de car esta de cerca de	peing wor <u>st</u> case)	भाग नामक नामा क्षेत्रक प्राप्त प्रथमित काल्या प्रभाग विकास व्यापक काल्या प्रथम प्रथम	ngi diliki ili ili salah salah dari ili ili ili ili ili ili ili ili ili i				

292

The state of the s

A	•	Name: P	AUL LAFLESH	Subje	est No.: 10	7	
		3/N:		Bex: M Race: W	HITE	Age: 17	;
:			Assigned Ma	sk Size Category	: PF	Values	
:		MASK	Expert Fit	Alternate Size	•	Alternate	Size
:		ILC	_				
:		SCOTT	5	M			
;	AV	CN US10	M	s s	;		
1		Height:	170.2 с≈	2. Wei	ght: 155 lbs		CE
3	•	Face Si	e – Adjustabl	le Metric Templat	e Circuafarano	s	133
4	•	Subsandi	ibular Skinfo	ld	• • • • • • • • • • • • •	•••••	3
3	-	Sitempor	ral Fossa - M	inimum Frontal Ar	c - Tape and 1	Marker Tool	19.5
ò	•	Esprosvo	gomatic Menter	a Arc – Tage and I	Marker Tool		25
7	-	Butragia	on Minimum Fra	ontel Arc - Tape	Bnly		28.6
S	•	Bitragio	un Pagenion A	c - Tape Only			30
à	-	Bitragio	on Hinimus Fr	ontal Arc - Tape	Holder	• • • • • • • • • •	31
iv	-	b:tragic	on fegenien Ar	rc - Tape Holder	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	30 <b>.</b> 5
11		Brskåee	atic Diameter	- Spreading Cali	per		13.9
i .	•	Biprozvo	cmatic Diame	ter - Spreading C	aliper		13
1;	-	Menton-:	Sellion Diame:	ter - Silding Cal	;per		:1.8
<u>:</u> 4	•	Silvgosa	atic Diameter	- Metric Gauge .	• • • • • • • • • • • • •		14.3
15	-	Biproz #	comatic Diamet	ter - Metric Saug	e		13.2
:5	•	Menton S	Sellion Diamed	ter - Metric Saug	e	•••••	11.2
17	-	Observa	tion of Anomal	lies:			

A.	A . Name: NOLEN KELLER Subject No.: 10							
			Sex: M Race: W					
÷		l Assigned Ma	sk Size Category	FF.	Values			
•	MASK	Expert Fit	Alternate Size	Expert Fit		Size		
:	ILC	5	-					
:		: 5		•				
: A'			S	•	•			
1.	Height:	180.3 cm	2. Weig	ght: 160 lbs				
ӟ.	្ម . Face Size - Adjustable Metric Teoplate Circumference 139							
4 .	. Submandibular Skinfold4							
5.	. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 20.							
. <del>.</del>	Siprozye	gomatic Mento	n erc – Tape and 1	Marker Tool		25		
7.	Bitrag:	or Miniaud Fri	ontal erc - Tage (	Only		20		
Э.	Bitragio	ou Łodourou H	rc – Tape Úmly			30.5		
Ģ.	Briragı	on Minimum Pro	ontal Arc - Tape :	tolder		32.5		
10 .	Bitragu	on Federalon A	rc - Tape molder .	· • • • • • • • • • • • • • • • • • • •		30.5		
ii.	812YGO#	atic Diameter	- Sureading Calid	er		13.6		
i.	Biprozve	gematic Diame	ter - Spreading Ca	eliper		12.8		
<b>:</b> 3.	Menton-	Sallion Disce	ter - Sliding Cali	lger	• • • • • • • • • • •	12		
1= .	Stavges	atic Diameter	- Metric Sauge		• • • • • • • • • •	14.4		
15.	Biprozve	gomatic Diame	ter - Metric Gauge	2		13		
io.	Menton S	Sellion brane	ter - Metric Saugi	:		12		
17.		tion of Amoma						
		<u>.</u>						
18.	Commert		perno worst case;					

of the first in the problem of the famous a transfer of the payable and the problem of the first of the famous of

. Name: PAUL LUDWICK Subject Ro.. 109

а.	Name: P	AUL LUDWICK	Subje	ect Rg 10	9				
			Sex: M Race: Wi		Age: 27				
+			sk Size Cetegory	: FF		+ : :			
:	MASK	Expert Fit	Alternate Sice	Expert Fit		•			
:	ILC	M	•						
	SCOTT	-	<u>.</u>			:			
•		•	5	•		:			
1.	Height:	193 cm	∠. Weig			C A			
3.	. Face Size - Adjustable Metric Template Circumference 152								
4.	. Submandibular Skinfold								
5.	. Bitemporal Possa - Minimum Frontal Arc - Tape and Marker Tool 20.7								
<b>s</b> .	. Biprozygumatic Menton Ake ~ Page and Marker Tool 25								
7 .	Bitragn	on Hini⇔ua Fro	sital est - Tabe (	Only	• • • • • • • • • •	<b>32</b>			
s.	Estrages	an Fegenton 🖮	c - Tape Uniy			32.1			
٠,	Ritragio	on Histopia Fro	ental Arc - Tape H	icider		34			
iv.	Bitragi	т Роцингов Аг	rc - Tape Holder	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	72			
11 -	r12.660	atic Diameter	- Spreading Calif	ae	•••••	14.6			
ı	ಕುರ್ಣಾ ಸ	essiG Diase	ler – Spreading Ca	silper,	• • • • • • • • • •	13.7			
13 .	Hentun-	Sellion Grames	cer - Sliding Cali	oper		15			
i4 .	Brayoosa	siıc Diameter	- Metric Gauge		,	15.1			
15.	Siprocyc	qsmatic Diame	ter - Matric Gauge	÷	• • • • • • • • • • • • • • • • • • • •	14.2			
15 .	Menton S	Sellion Diase	ier - metric Gauge	· · · · · · · · · · · · · · · · · · ·		12.			
17.	Goservat	tion of Anomal	iles:						
	_		• ••						
13 .	Contort	0 - 5 to 5	perno worst case)						

Α.	Name: T	IMOTHY DANIEL		Sub 3	ect No.: 11	0			
	S/N:		Sex: M Race: W	HITE	Age: 22				
+ :			sk Size Category		Values				
:	Mask	-	Alternate Size	•	Alternate	Size			
		M	6						
•		H :			:				
: AV	ON USIO	•	L		;				
1.	Height:	167.6 Cm	2. Weig	jht: 155 lbs					
3.	Face Si:	ze - Adjustah)	ie Metric Template	= Circumferen	ce	<u>cm</u> 143			
4.	Subnandi	ibular Skinfo	ld tel		•••••	4			
5.	. Bitemporal Fossa - Ministon Frontal Arc - Tape and Marker Tool 19.7								
ė.	. Biprozvacomatic Menico Arc - Tape and Marker Tool 25.5								
7.	Bitragu	on Minimum Sec	mital Arc - Tape (	Only	• • • • • • • • • • • • •	29.5			
e .	Bitragi:	on Fousnium Ar	ra - Tape Only		•••••	32			
÷ .	Sitragio	೦೧ ಗುಗುಹಾಡ ೯೯	intal Arc - Tape I	Holder		32.2			
10.	Bitragie	on Fogusson A	rc - lape Holder .		•••••	32			
11.	Sizygom	atu. Diameter	- Spreading Cali	per		14.2			
12.	Bigross	gomatic Diame	ter - Spreading Ca	aliper		13.7			
13.	rienton-1	Seliion Diame	ter - Sliding Cal:	iper	• • • • • • • • • •	12.3			
14 .	Si zygona	alı brameter	- Metric Gauge		• • • • • • • • •	14.7			
15 .	Biprozye	gomatic Diame	ter - Metric Gaug	2		13.5			
16.	Menton :	Sallion Diame	ter - Metric Gauce	2	•••••	12.9			
17 .		tion of Anoma							
18 .	Contert	0 - 5 (0)	peing worst case)	~	•••••				

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Α.	Name: W	ILLIAN EGRNET	Sub is	est No.: 11	li					
	S/N1		Sex: M	Race: W	HITE	Age: 19	7			
÷		Assigned Mas	sk Size (		PF	Values	<del>-</del>			
: .	ASK	Expert fit	Alterna		-	Alternate	Size			
: 1	ILC	М					,			
2	COTT		•	M			:			
: AVC	N US10		-		<del>-</del>		•			
	. Height: 182.8 ca 2 . Weight: 178 lbs									
3.	Ca - Face Size - Adjustable Metric Template Circumference 149									
<b>4</b> .	. Submargibular Chin/ole									
٠.	. Bitemporal Fossa - Minimum Frontal Arc - Tabe and Marker Tool 19.5									
ċ.	Bibrozvo	ismatic Mentor	: Ast - ĭ	ape and r	Marker Tool	••••••	26.2			
7.	Bitragio	an Ain.aua Fro	ontel Arc	: - Tapa S	oly	•••••	28.2			
ŝ.	Bitraçi	on Paganton A	c - Tapo	գուհ	•••••	• • • • • • • • •	31.3			
9.	Patraçio	on Hinarum Fro	ontal Arc	- Tage }	iol <i>Ger</i>	• • • • • • • • •	31			
10 -	sitradio	in GogGerice Ar	c - Taba	Holder .	•••••		31.3			
11 .	Fizyges	itic Diameter	- Stream	ding Calıp	er	•••••	13.7			
12.	Bip. ozvç	icma!ic Diame!	.er - Spr	eadıng Ca	diper		12.9			
13.	Menton (	Sellion Drame!	er - Sli	ıdıng Calı	per	• • • • • • • • • •	13.2			
14.	B12.goma	atic Diemster	- Metric	Sauge	••••••		14.4			
15 .	Biprez.e	gopatio inapet	ier - Met	cric Gauge	• • • • • • • • • • • • • • • • • • • •		13.4			
is .	Menton S	Seliion biaset	er - Met	೧೯೬೮ ಕಿತ್ತುಕ್ಕ	· •••••		:3.2			
13.	Observat	cion of Anomal	ies:							
-										
-	·	· · · · · · · · · · · · · · · · · · ·								
18 .		9 - 5 (0 t					. <del>-</del>			

A . Name: ROBERT POLITO Subject No.: 112

47	A. Name: RUBER: PULITU Subject No.: 112								
	S/t!			Race: w		Age: 2			
į			Mask Size (	Category :	FF		:		
:	Mask	Expert Fi		ate Size	Expert Fit		•		
:		i M					•		
		M	:	5			. :		
		10 : M	•	L	!		• ;		
•		nt: 172.7 cm					<u>CR</u>		
3	. FACE	: Size - Adjust	able Metric	: Tempiata	e Circumferend	e			
4	วินโก	andibular Skin	fold		• • • • • • • • • • • • • • • • • • • •		4		
5	. Bite	emporal Fossa -	· Minimum Fr	rental Arc	= - Tape and }	darker Tool	19		
Ė	. Sipr	osvopatic Men	itos Arc - 1	lape and l	Marker Tool	•••••••	26		
•	. 8:4:	agion Himimum	Frontal Arc	- [ape (	ūnly	• • • • • • • • • •	22.5		
3	. Bitr	agrum Pagan.on	Arc - Tapa	∮Only	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	31		
è	. Bitr	ಇಲಾಗಾಗಿ ಇಲ್ಲಾ	Frontal A c	- Tape H	iolder	• • • • • • • • •	71.7		
1,,	. Bitr	earer Eedeniou	Arc - Yape	Holder .	• • • • • • • • • • • • • • • • • • • •		7.1		
įį	. 9::	gomatic Diamet	er – Spread	Sing Calin	DET	• • • • • • • •	15.4		
iΞ	. Sipr	ozvoomatic Dia	meter – Spr	eading Ca	eliper		12.7		
13	. Ment	on-Sellien Dia	oseter - Sli	ding Cali	per	• • • • • • • • •	13.3		
14	. Bicy	gosatic Drabet	er - Metric	: Bauge	• • • • • • • • • • • •	•••••	i7.9		
15	. Bip:	ocyuomatic Dia	meter - Hei	ric Bauge	?	•••••	12.8		
lė	. Ment	on Sellion Dia	meter – Met	uric Sauge	:	••••••	13.4		
17		ervation of And							
	•	• .							
19	. Conf	ort 0-5 (	o perud so.	st case,	• • • • • • • • • • • • • • • • • • • •				

Α.	. Name: KEITH PANG Subject No.:									
	S/N:		Sex: M Race: W		Age: 18					
+		: Assigned Mask Size Category : PF Values								
		Expert Fit	rt Fit : Alternate Size : Expert Fit : Alternate							
	LC	L	. H	•						
-				į						
		<u> </u>	i n			ì				
1.	Height: 190.5 cm 2 . Weight: 173 lbs									
3.	Face Size - Adjustable Metric Template Circumference									
4.	. Submandibular Skinfold 5									
5.	. Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 19									
Ś.	. Siprozygopatic Menton Arc - Tape and Marker Tool									
7.	. Bitragion Minimum Frontal Arc - Tape Only									
೪.	. Bitragion Pospnion Arc - Tape Only									
٠ ٣	Sitragion Minimum Frontal Arc - Tape Holder									
10.	Sitragion Pagamian Arc - Tape Holder									
<b>:1</b> .	Bizygomatic Diameter - Spreading Caliper									
12.	Biprozygomatic Diameter - Spreading Caliper									
13.	Menton-Sellion Diameter - Sliding Caliper									
14.	Bizvoomatic Prameter - Hetric Gauge									
15 .	Biprotygomati: Drameter - Metric Gauge									
16 .	Menton Sellion Diameter - Metric Gauge									
		ion of Anomal								
-			··· · · · · · · · · · · · · · · · · ·	·						
-			·•							
18 .	Confort	v - 5 (0 b	eing worst case/							

والمراهب والمراهب كالمراهب والمراهب والمراعب والمراهب والم والمراهب والمراهب والمراهب والمراهب والمراهب والمراهب والمراع

A	A . Name: SOHN COX Sub:						Sub je	ect No.:	114				
		S/N:		Sex: M	Race: W	HITE		Age:	20				
:			Assigned Ma	<del>-</del>			FF Values						
:	MASK		Expert Fit	t   Alternate Size   E			•	Alterna	te Size				
:		ILC	M		L	:	:						
:		SCOTT	M	•	L								
:	AV	ON US10	•	•	L	:	;						
1	•	Height: 192.8 cm 2 . Weight: 173 lbs											
3	•	Face Size - Adjustable Metric Template Circumference 148											
4	•	Submandi	bular Skinfo	d	• • • • • • • •	••••••	. <b></b>	•••••	5				
5	•	Bitemporal Fossa - Minimum Frontal Arc - Tape and Marker Tool 19.											
ċ	•	Biprozygomatic Henton Arc - Tape and Marker Tool 27											
7	-	Bitragion Minimum Frontal Arc - Tape Only 34											
ទ	•	Entragion Fogonion Arc - Tape Only											
9	-	Bitragion Minimum Frontal Arc - Tape Holder 32.3											
10	•	Bitragion Pogenion Arc - Tape Holder											
11	•	Bizygomatic Dismeter - Spreading Caliber											
1_	•	Siprocygomatic Diameter - Spreading Caliper											
13	•	Menton-Sellion Diameter - Sliding Caliper											
14	•	Bizvgomatic Diameter - Metric Gauge											
15	•	Biproc gematic Diameter - Metric Gauge											
15	•	Merton Sell:on Diameter - Metric Gauge											
17	-	Observation of enomalies:											
		-											
					· · · · · · · · · · · · · · · · · · ·		<b>-</b>	. <u> </u>					

### APPENDIX G

Example: Principle Component Analysis

#### PRINCIPAL COMPONENT ANALYSIS EXAMPLE

EXAMPLE (Dunn, G. and Everitt, B. S. "An Introduction to Mathematical Taxonomy" Cambridge University Press, New York, 1982, pg 51.)

In this study the carapace length, width and height were measured for numerous turtles. Principal components analysis resulted in the following components:

Y1 = 0.81(length) + .050(width) + 0.31(height) 98.64%

Y2 = -0.54(length) + .083(widik) + 0.94(height) 0.95%

Y3 = -0.20(length) - 0.25(width) = 0.94(height) - 0.432

The percentage following each equation is the percent of the total variability which the corresponding principal component has accounted for. In this case the first principal component accounted for SS.6% of the total variability in the data. The interpretation of the first principal component for physical objects is typically related to overall size. Herice that all of the coefficients are positive so that increases in either height, which or length would increase YI, the score for size. Thus YI scores for each tertle could be substituted for height, width and weight without loss of such information relevant to overall size.

The second and third principal components correspond to two different expressions of shape. Y2 contrasts length to (which + height) while Y3 contrasts height to (length plus width). In studies such as this and also the face size study, the second principal components is typically related to shape while the first is related to size.

### APPENDIX H

Recommendations for S/M and M/L Dividing Paints

A. S/M and M/L Dividing Points, TM Series, company by company (excluding preceding data). For this set of recommendations, Dr. A. T. Steegman ranked the best dividing point predictors from those which showed the least overlap to those with the most. Only the first seven with moderate to good predictive power are listed (Excellent: best, fair" worst).

#### 1. ILC Mask:

- a.  $\fiv{7} + \fiv{7} 8$  (Ear-Forehead Arch + Ear Chin Arc): S/M = 61.3 cm (fair); M/L = 63.8 cm (good)
- b. #10 (Ear-Chin Arc,, H): S/M = 31.3 cm (fair)
- c. Size factor 2 ) 1/2 Ear-Frontal Arc + 1/2 Ear + Face width): = 44.7 cm (fair); M/L = 45.9 cm (fair)
- d. #8 (Ear-Chin Arc): M/L = 33.2 cm (good)
- e. #6 (Cheekbone-Chin Arc): S/M = 25.6 cm (fair)
- f. #3 (Adj. Template): M/L = 163 cm (fair)
- g. #2 (weight): M/L = 179 lb. (good)
- h. #9 (Ear-Forehead Arc, H): M/L = 32.5 cm (good)

#### 2. Scott Mask

- b. #13 (Face Height): S/M=12.1 cm (good ); M/L =12.8 cm (good)
- c. #3 (Adj. Template): S/M = 143 cm (good); M/L = 162 cm (good)
- e. #I4 (Face Ht., 6): M/L = 13.0 cm (fair)

- f. #5 (Temple-Forehead Arc): M/L = 19.5 cm (good)
- g. £! (Height): N/L = 182 cm (fair)

#### 3. Avon Mask

- a. Size Factor 2 (1/2 Ear-Frontal Arc + 1/2 Chin Arc + Face Width): M/L = 45.8 cm (good)
- 5. #8 (Ezr-Chin Arc): M/L = 33.3 cm (excellent)
- c. #7 + #8 (Ear-Chin + Ear Forehead Arc): M/L = 63.2 cm (exceilent)
- d. #6 (Cheekbone-Chin Arc): S/M = 25.5 cm (good)
- e. #10 (Ear-Chin Arc, H): M/L = 32.5 Om (good)
- f. #3 (Adj. Template): M/L = 162 cm (good)
- g. #7 (Ear-Forehead Arc, ii): M/L = 32.6 cm (good)

### B. S/M and M/L Dividing, BF Series

Although a full set of data were run for this analysis, it will be given more simple treatment than the TM series. Here Dr. Steegman simply listed the top ranked predictor for each company, without considering the univariate or bivariate issue. All are ranked by how well they predict both S/M and M/L, though only one may be given if the other is poor.

- 1. Recommendation for prediction (dividing) point: ILC masks.
  - a. #7 + #8 (Ear-Forehead Arc + Ear-Chin Arc)
    - 1) S/M clearly at 61.5 cm
    - 2) M/L poorly at 63.3 cm
  - b. #2 (Weight)
    - 1) S/M poorty at 160 lb.
    - 2) M/L clearly at 190 lb.

- c. 35 (Temple-Forehead Arc)
  - 1) M/L clearly at 19.5 cm
- d. Shape I, #3 (#12-Cheekbone Wd.(1/2)#6 Cheekbone-Chin Arc)
  - 1) */i clearly at 0.970
- e. Shape ī, £ī (£12-Cheekbone WC.≩13 Face Height)
  - 1) M/L c.early at 1.920
- f. #5 (Chsekbone-Chin Arc)
  - 1) K/L fair at 25.5 cm
- g. #5 + #6 (Temple-Forehead + Cheekbone-Chin Arc)
  - 1) M/L fair at 45.9 cm
- 2. Recommendation for prediction (dividing points), Scott Masks
  - a. #7 (Ear-Forehead Arc)
    - 1) M/L clearly at 30.1 cm
  - b. #6 (Cheekbone-Chin Arc)
    - 1) S/M clearly at 25.4 cm
  - c. ₹3 (Adj. Template)
    - i) S/M fair at 144 cm
  - d. ∉13 (Face Height)
    - 1) S/M fair at 12.1 cm
      -NO OTHERS ACCEPTABLE-
- 3. Recommendations for Prediction (dividing) points, Avon Masks
  - 3. #3 (Adj. Template)
    - 1) S/M clearly at 140 cm

- b. Size  $\frac{2}{7}$  (1/2  $\frac{2}{7}$ , Ear Frontal Arc ÷ 1/2  $\frac{2}{8}$  Ear-Chin Arc +  $\frac{2}{1}$ 11, Face Width)
  - 1) S/M fair at 44.0 cm
- c. #7 + #8 (Ear-Forehead Arc and Ear-Chin Arc)
  - S/M clearly at 60.2 cm
- d. #8 (Ear-Chin Arc)
  - 1) S/M clearly at 31.0 cm
- e. #13 (Face Height)
  - 1) S/M clearly at 12.3 cm
- f. #14 + #16 (face Wd., G + Face Height, G)
  - 1) S/M fair at 26.7 cm
- C. S/M and M/L Dividing Points, PF Series
  The treatment is that given the BF Series, preceding.
  - 1. Recommendation for Prediction (dividing) points for ILC Masks.
    - a) #5 + #6 (Temple-Forehead Arc + Cheekbone- Chin Arc)
      - 1) S/M poorly at 44.2 cm
      - 2) K/L clearly at 46.0 €
    - b) #7 (Ear-Foreigad Arc)
      - 1) S/M poorly at 29.5 cm
      - 2) K/L clearly at 30.3 cm
    - c) #5 (Temple-Foreilead Arc)
      - 1) M/L clearly at 19.5 cm
    - d) ₹5 (Cheekbone-Chin Arc)
      - 1) M/L clearly at 26.5 cm

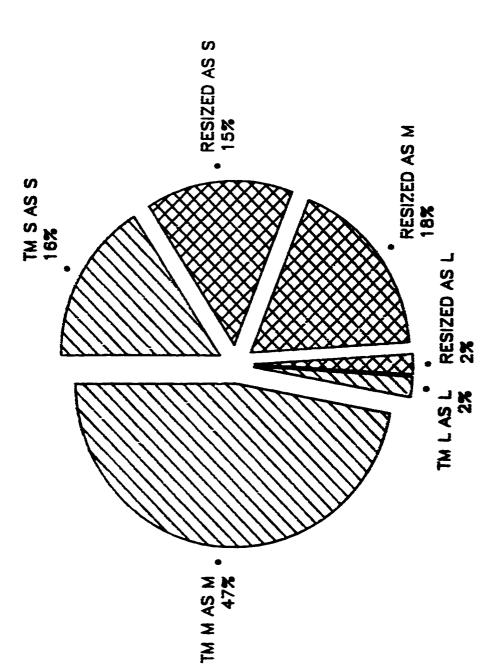
- e) Size Factor 2 (1/2 #7, Ear Frontal Arc + 1/2 #8, Ear-Chin Arc + #11. Face Width)
  - S/M clearly at 44.5 cm
- f) #11 + #13 (Face Width + Face Height, Gauge)
  - 1) M/L clearly at 27.3 cm
- 2. Recommendation for (dividing) points for Scott Masks
  - a) #5 + #6 (Temple-Forehead Arc + Cheekbone Chin Arc)
    - 1) S/M fair at 44.7 cm
  - b) #7 + #8 (Ear-Frontal Arc + Ear-Chin Arc)
    - 1) S/M fair at 61.3 cm
  - c) ∉6 (Cheekbone-Chin Arc)
    - 1) S/M clearly at 25.2 cm
  - d) #12 + 1/2 #6 (Cheekbone Wd. + 1/2 Cheekbone-Chin-Arc)
    - 1) S/M poorly at 25.8 cm
  - - 1) S/M clearly at 158 lb.
  - f) #5 (Temple-Forehead Arc)
    - 1) M/L clearly at 19.4 cm
- 3. Recommendation for Prediction (dividing) Points for Avon Masks.
  - - 1) S/M clearly at 140
    - 2) M/L clearly at 157
  - b) #7 + #8 (Ear-Forehead Arc + Ear-Chin Arc)
    - 1) S/M excellent separation at 61.0 cm

- c) #7 (Ear-Forehead Arc)
  - 1) S/M clearly at 29.5 cm
- d) #6 (Cheekbone-Chin Arc)
  - 1) S/M clearly at 25.5 cm
- e) Size Factor 2 (1/2 #7, Ear-Frontal Arc + 1/2 #8, Ear-Chin Arc, + #11, Face width)
  - 1) S/M clearly at 44.3 cm
- f) #8 (Ear-Chin Arc)
  - 1) S/M clearly at 31.3 cm
- g) #9 + #10 (Ear-Forehead Arc + Ear-Chin Arc)
  - 1) S/M clearly at 62.7 cm

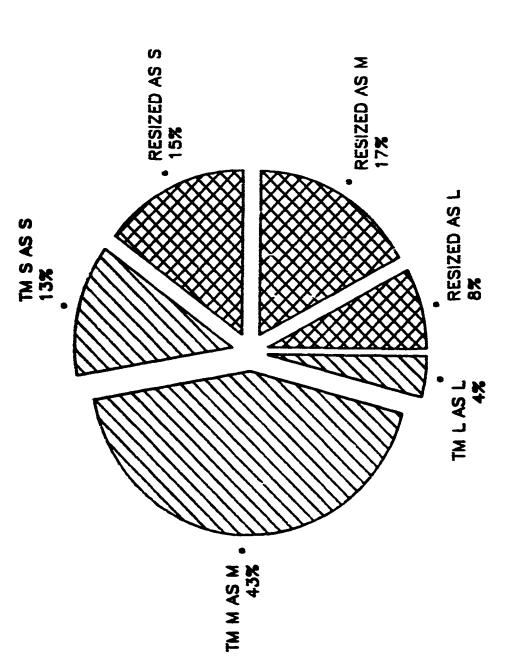
APPENDIX I
Size Line Analysis Results

#### APPENDIX J1

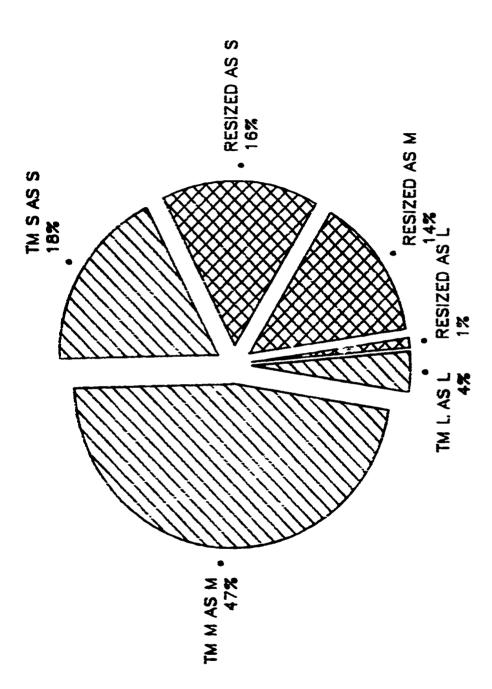
SCOTT XM40 Size Line Analysis Results

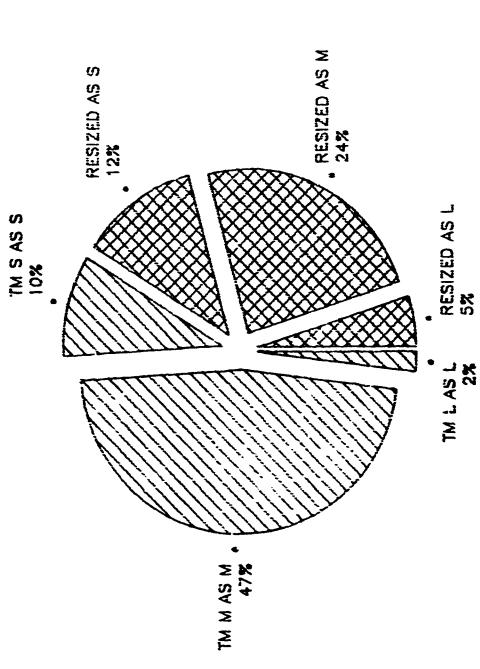


METHOD 3



METHOD 5

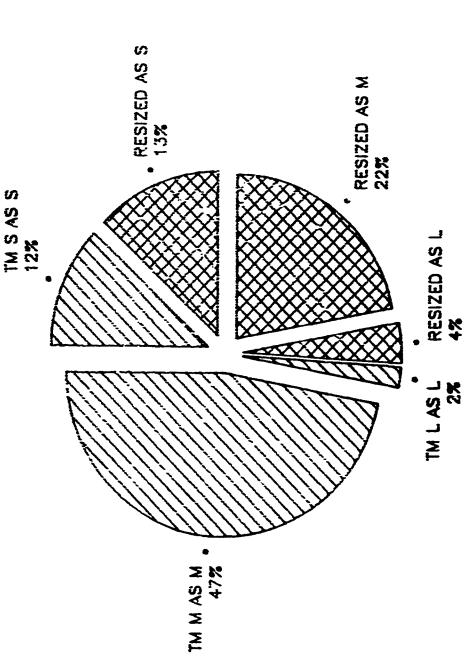




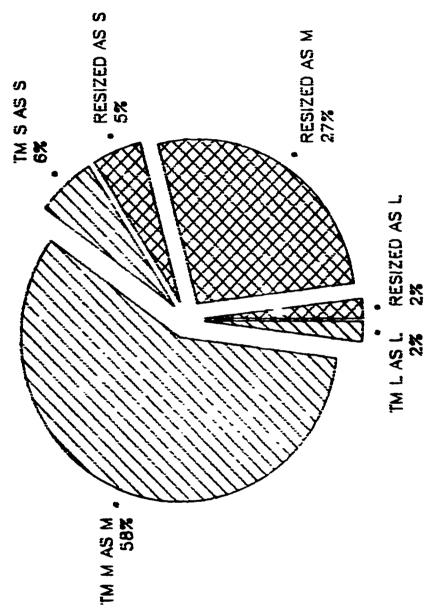
METHOD 7

315

# SCOTT XM40 SIZE LINE ANALYSIS

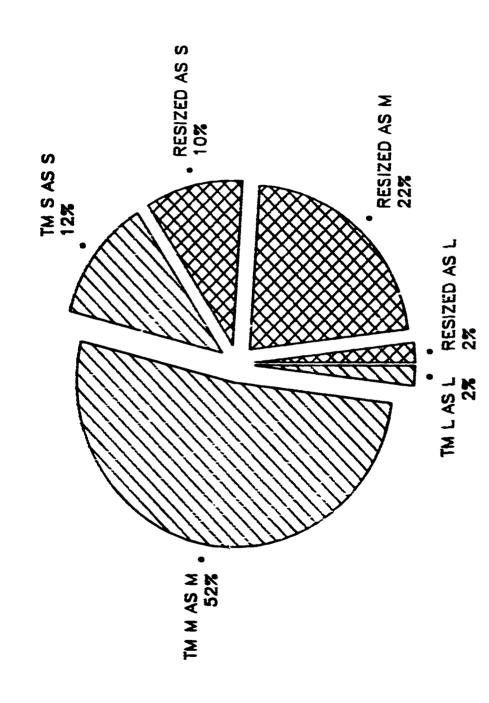


METHOD 8

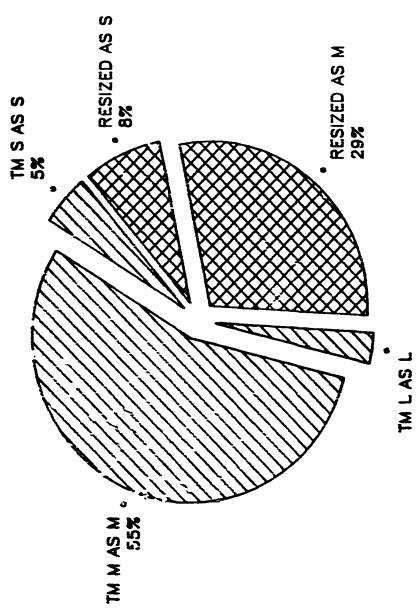


TM L AS L

METHOD 9



METHOD 10



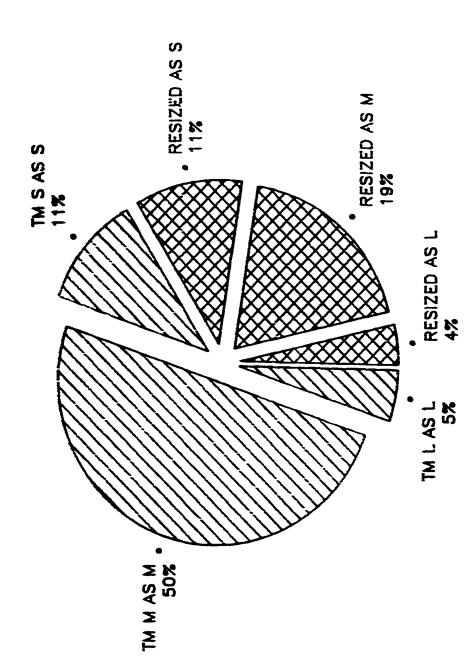
TM L AS L

RESIZED AS M 25% RESIZED AS S TM S AS S 8% TM M AS M

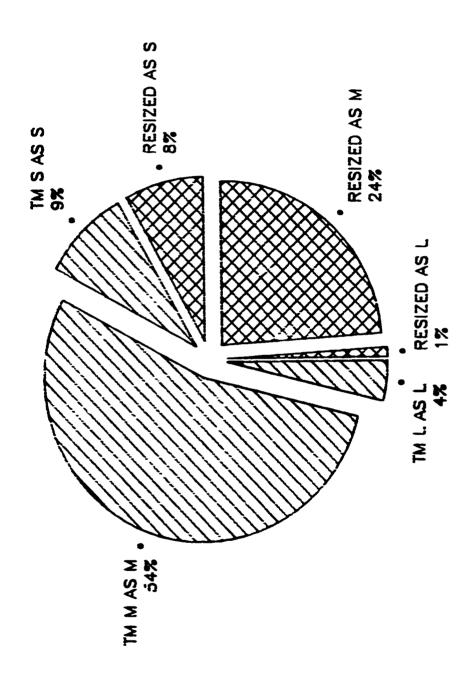
METHOD 12

RESIZED AS L 5%

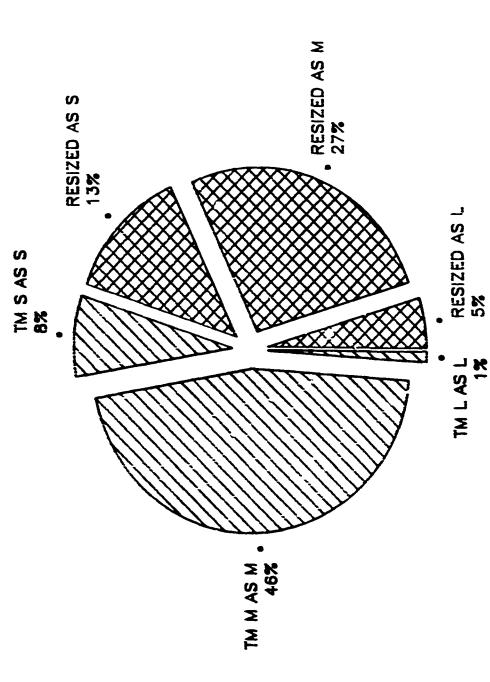
TM L AS L



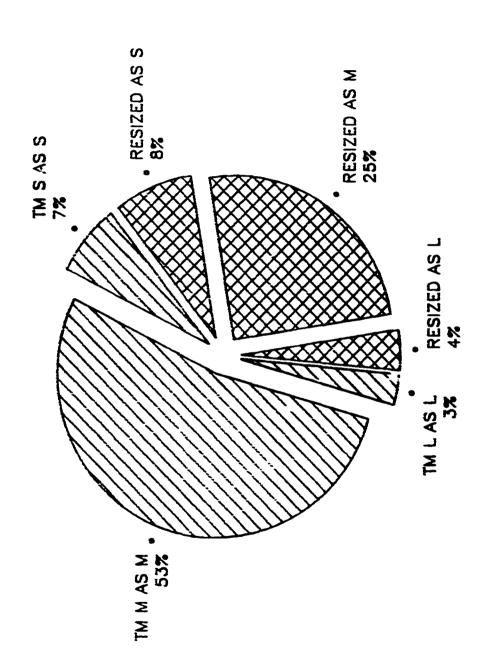
METHOD 13



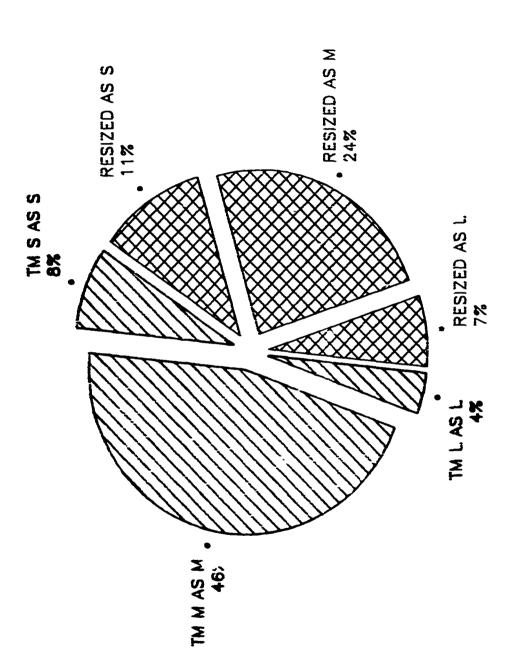
METHOD 14



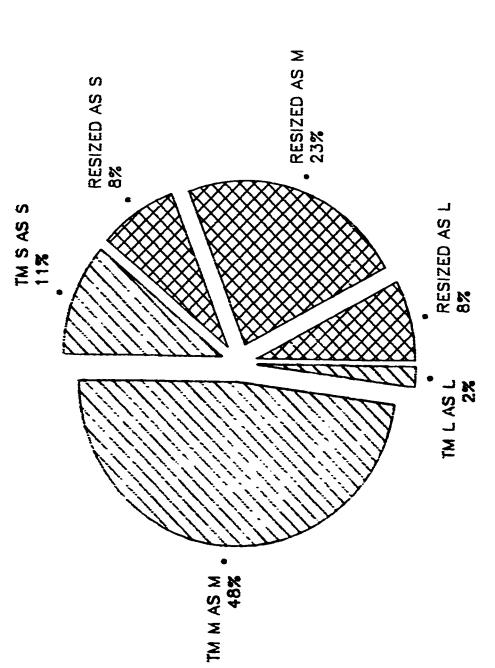
METHOD 15



METHOD 16

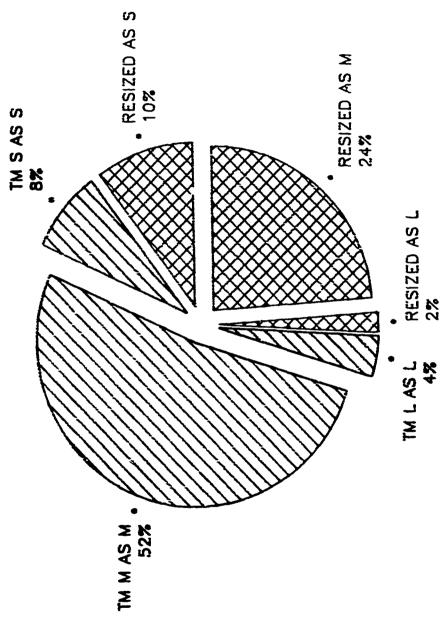


METHOD 5+6

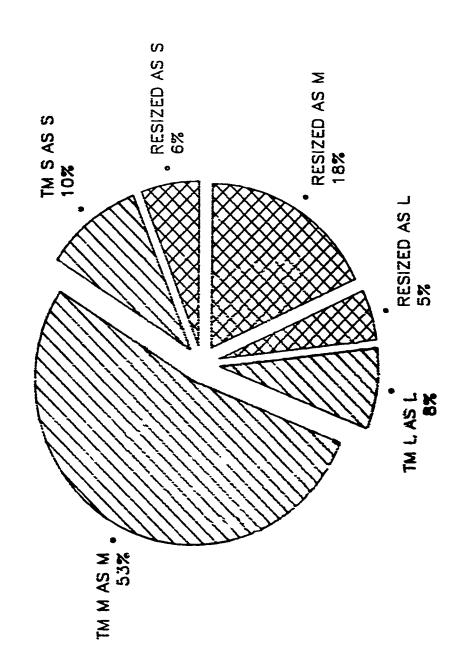


METHOD 9+10

# SCOTT XM40 SIZE LINE ANALYSIS SIZE DETERMINATION



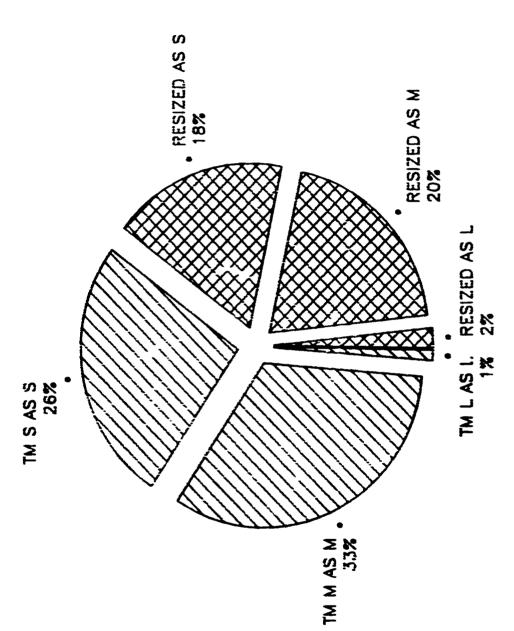
METHOD 12+1/2(6)



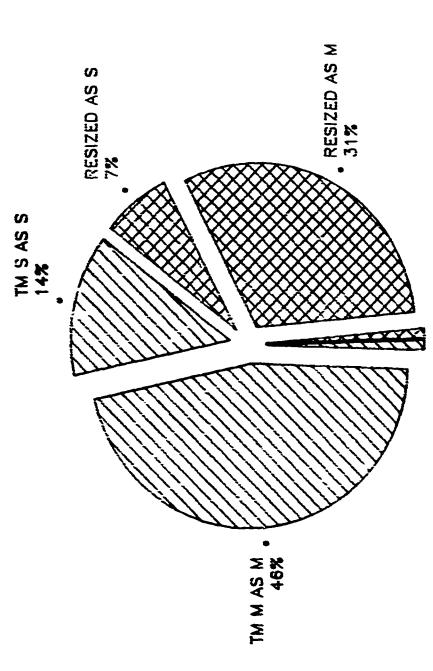
METHOD 14+16

APPENDIX J2

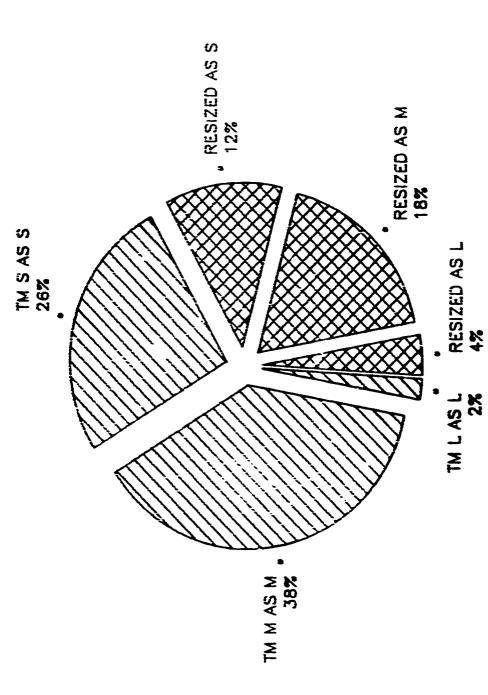
ILC XM40 Size Line Analysis Results



METHOD 3



TM L AS L RESIZED AS L

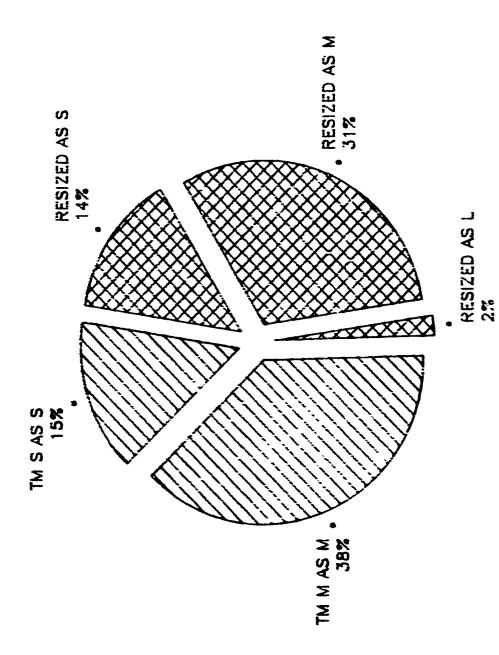


METHOD 6

RESIZED AS M 28% RESIZED AS S TM S AS S 16% TM M AS M 42%

TM L AS L RESIZED AS L

METHOD 7



METHOD 8

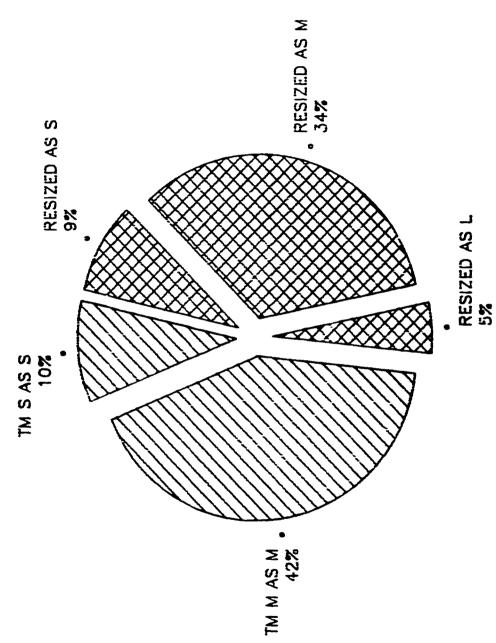
TM L AS L RESIZED AS L

METHOD 9

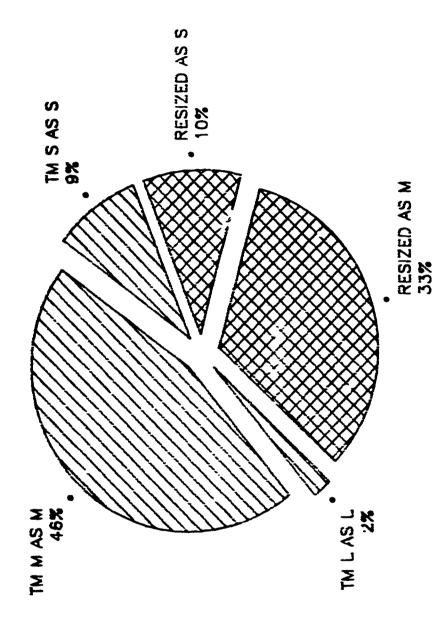
TM M AS M 44%

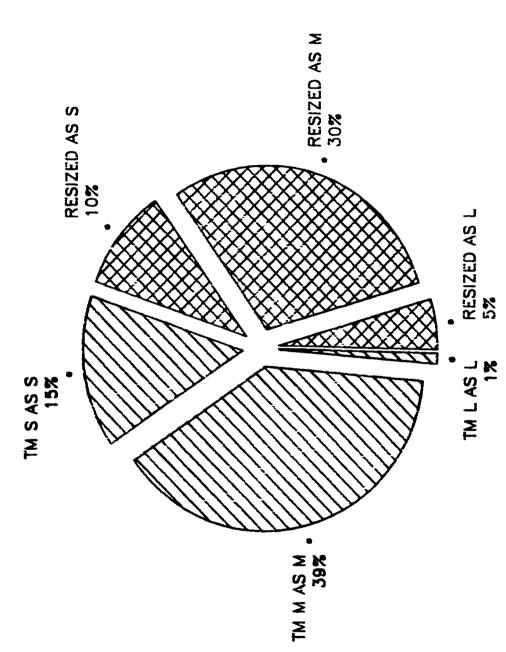
SIZE DETERMINATION ILC XM40 SIZE LINE ANALYSIS

TM S AS S 16%

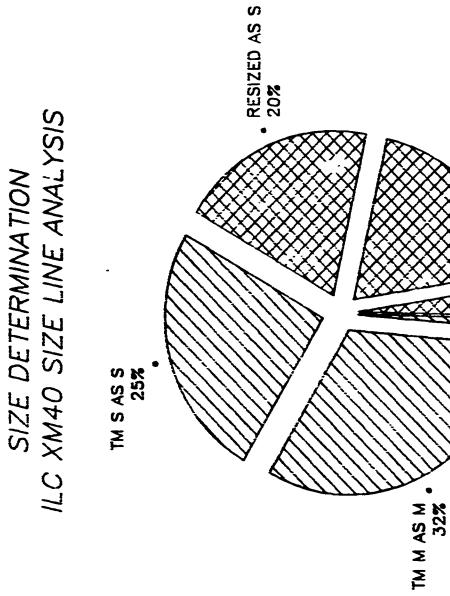


METHOD 10



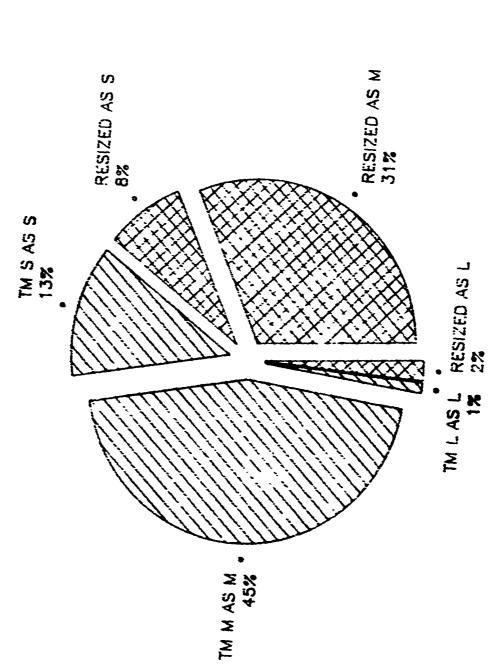


METHOD 12

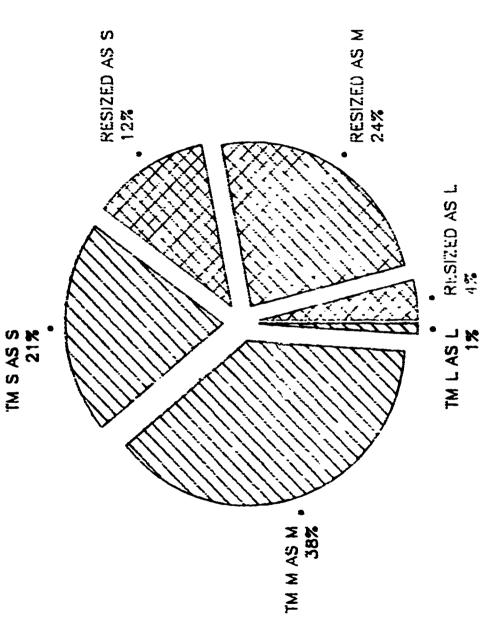


RESIZED AS L. TM L AS L

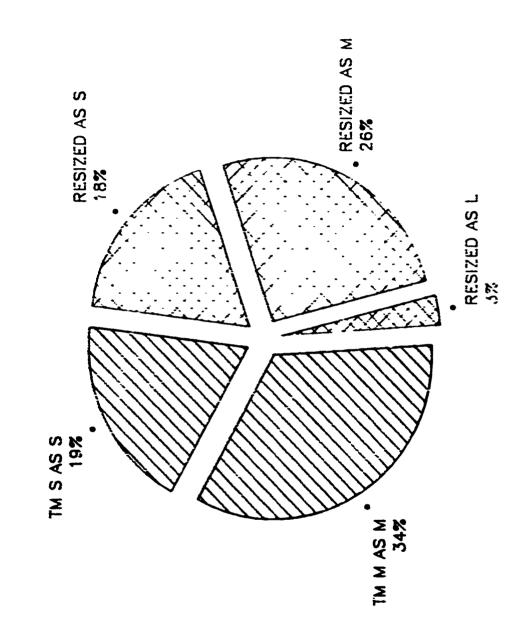
RESIZED AS M 19%



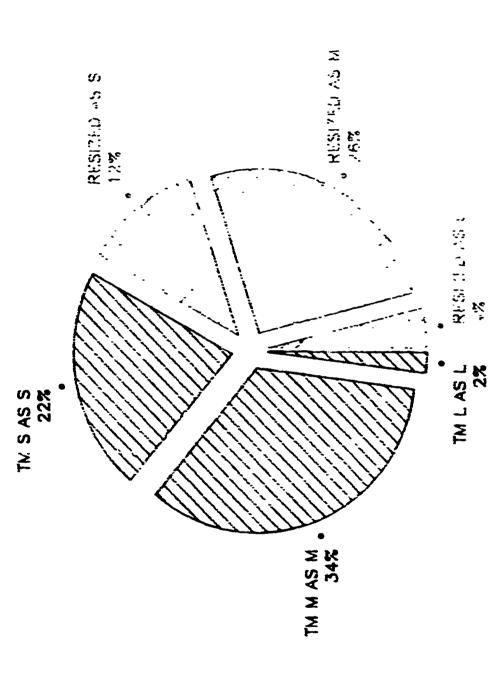
METHOD 14



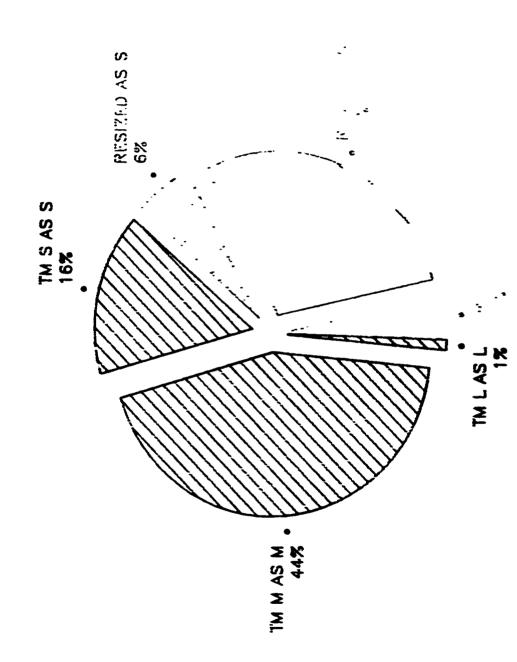
METHOD 15



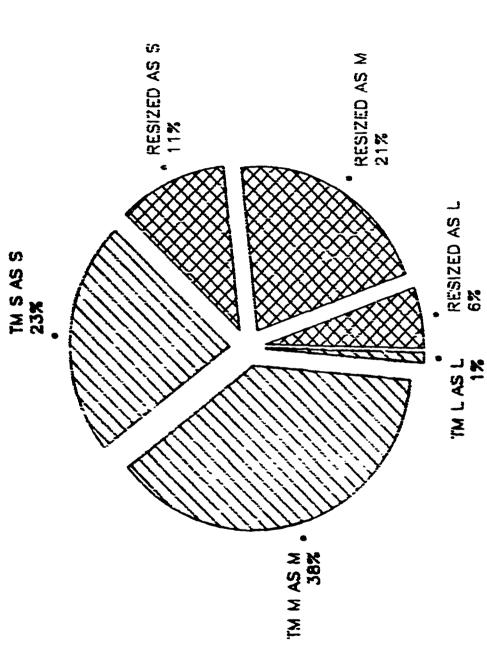
METHOD 16



343



METHOD 9+10



METHOD 12+1/2(6)

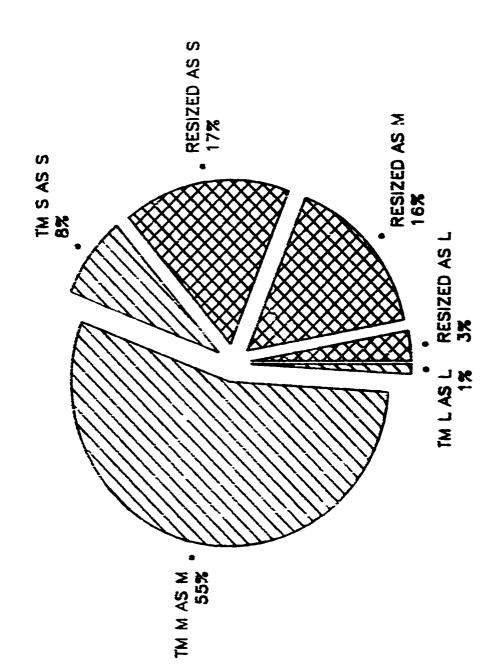
RESIZED AS S 12% TM S AS S 22%

TM L AS L RESIZED AS L

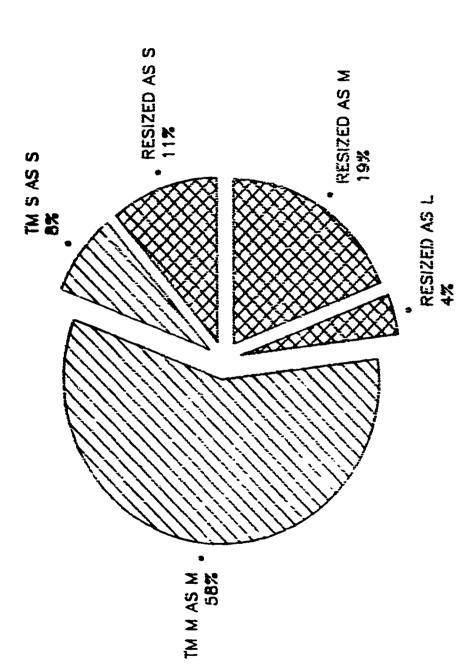
3% 2%

METHOD 14+16

TM M AS M WI 40% APPENDIX J3
US-10 Size Line Analysis Results



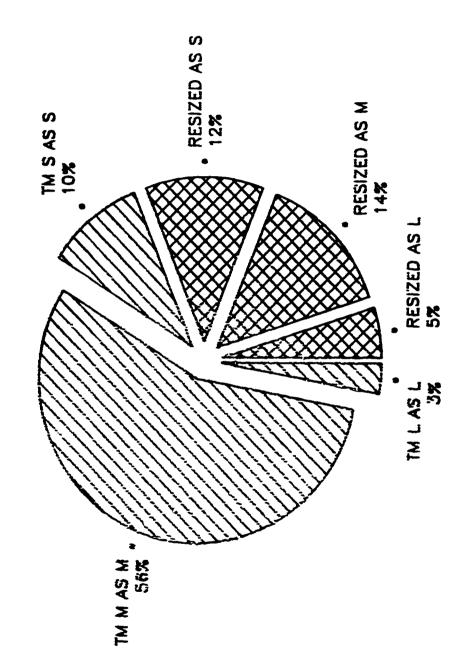
METHOD 3



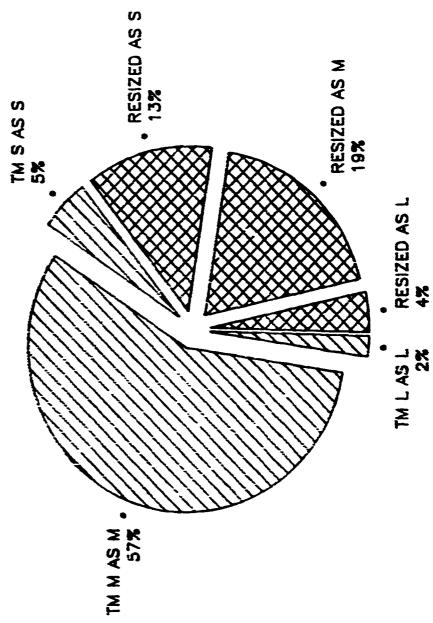
•

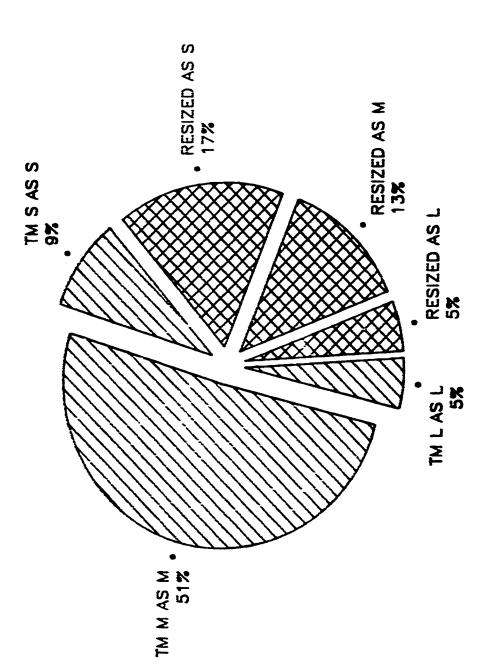
SSESSES ADDAMENTAL SESSES

i ees Vesseseses Alabanasan vasatataa (Inserteessa aaraasaa aanaan aanaanaa) kaanaaaa



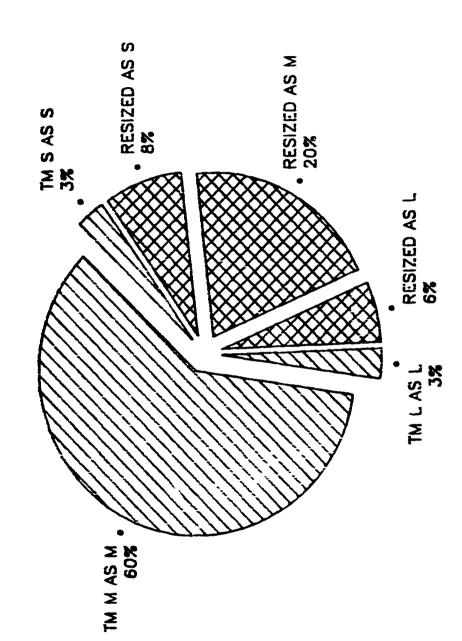
METHOD 6



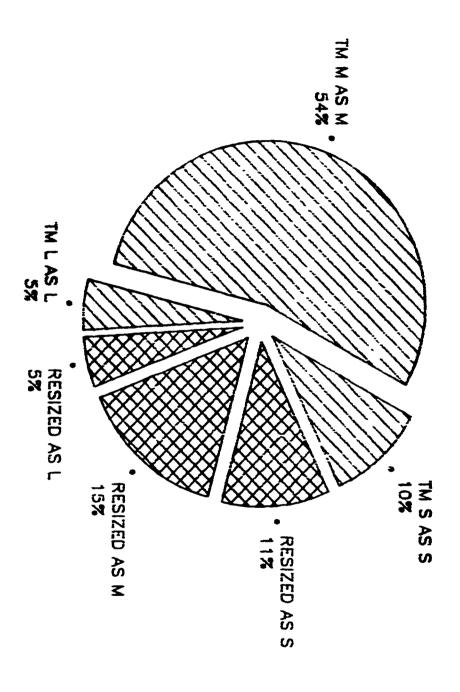


METHOD 8

recorded comments between holds of the comments of the comment

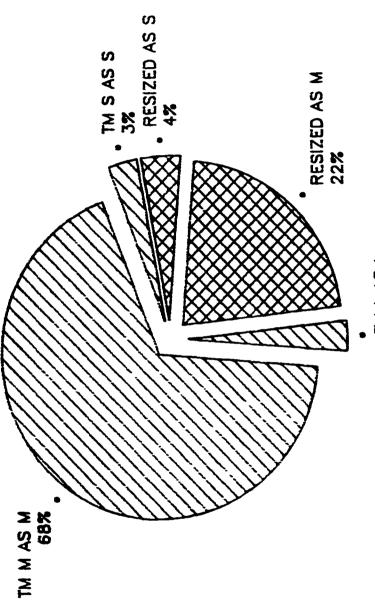


353

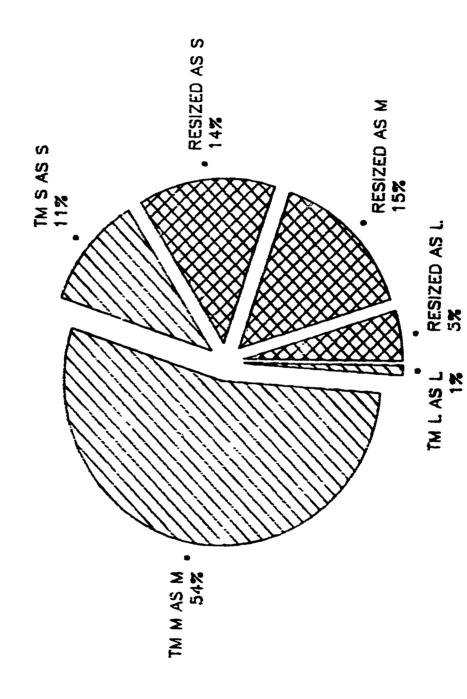


METHOD 10

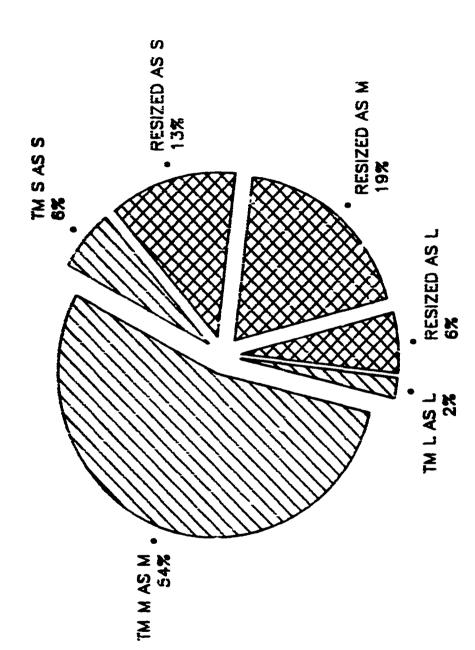
THE PROPERTY OF THE PROPERTY O



TM L AS L

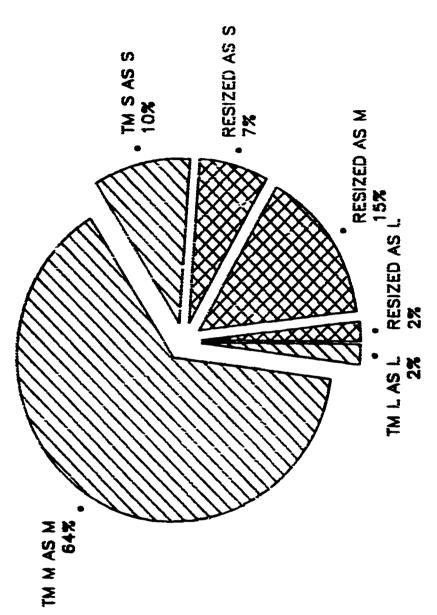


METHOD 12

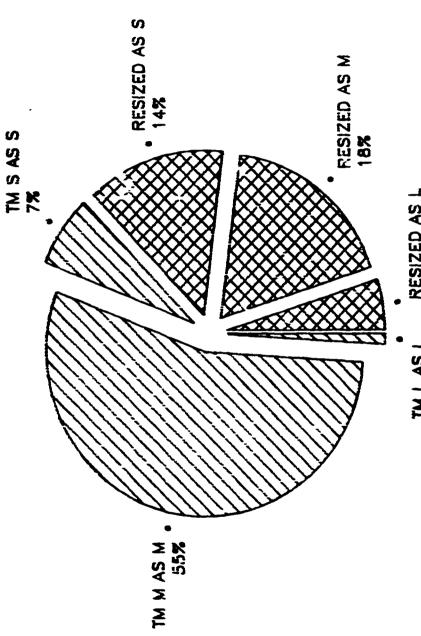


METHOD 13

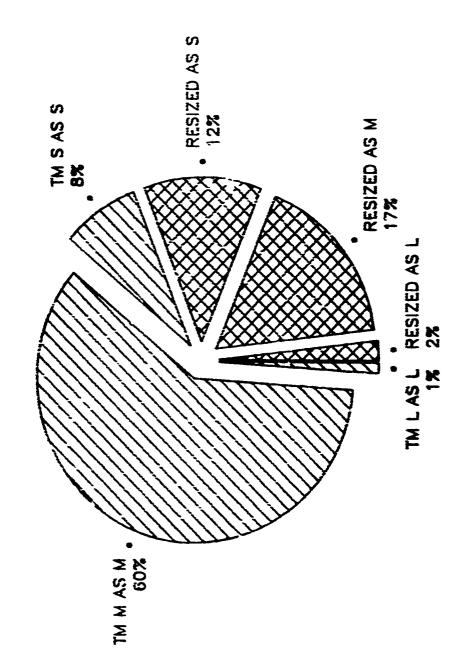
THE PARTY HEREOTOPY CONTINUES CONTINUES TO THE PARTY OF T



METHOD 14

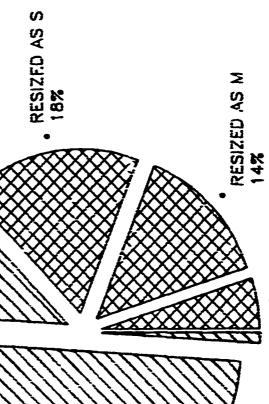


TM L AS L RESIZED AS L



METHOD 16

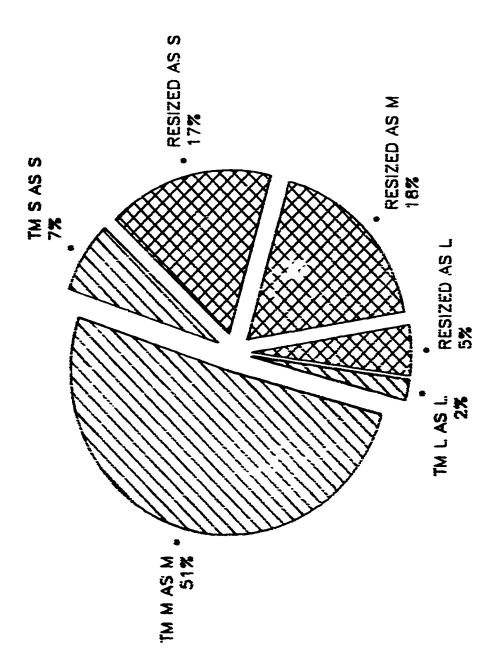




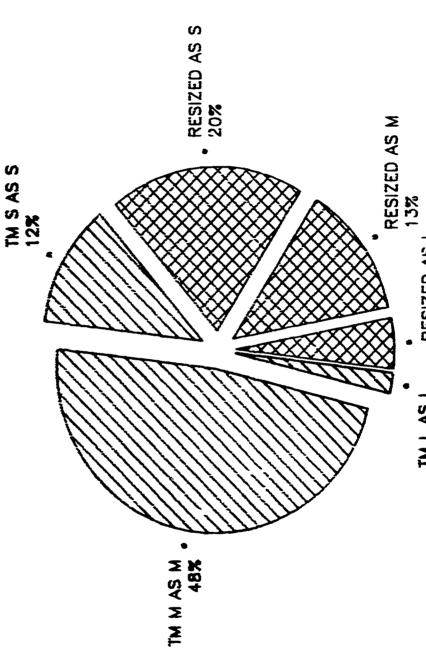
TM L AS L RESIZED AS L

METHOD 5+6

TM M AS M ...



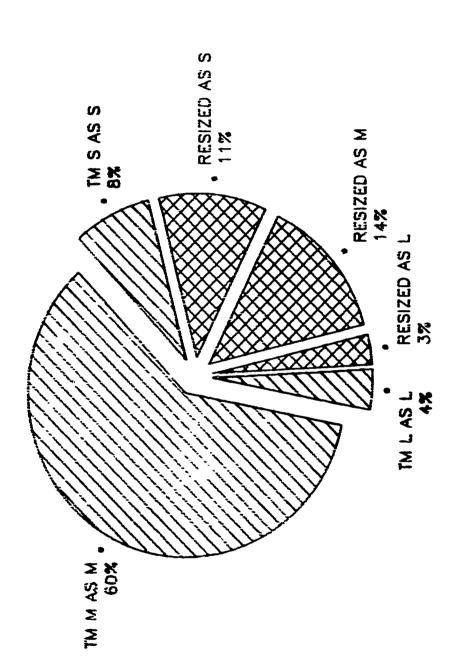
METHOD 9+10



METHOD 12+1/2(6)

RESIZED AS L 5%

TM L AS L



METHOD 14+16